TRANSMISSION No. 3
STARDATE June 1985
95p

Computer GAMER

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THE FOURTH PROTOCOL—TAPED

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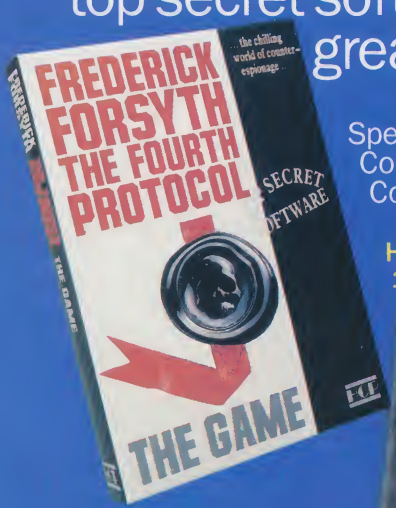

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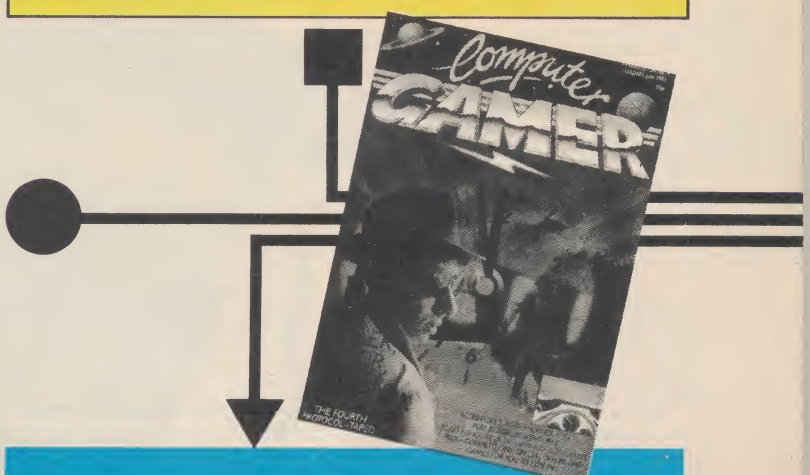

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NEWS

Eecaan's Transmission

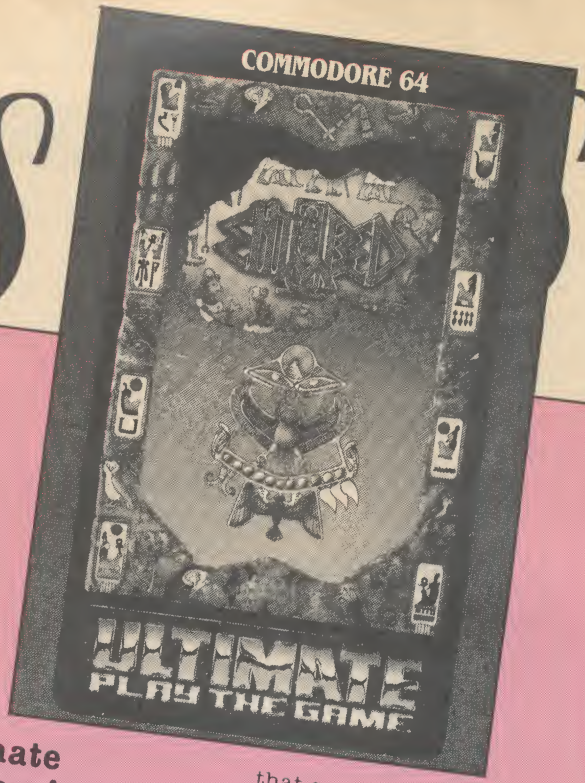
One of the first games computers available was the Atari 800 (and 400). These machines had unrivalled graphics and sound facilities and a wealth of American software ripe for importing. Unfortunately the UK market was young and the software stayed on the wrong side of the Atlantic and the 800 fell from favour.

Five years later the Atari is back. Although repackaged as the XL range the machine stays largely the same. At £99 the 600XL is an excellent games machine and we are delighted to have one to give away this month. For only thirty pounds more the 800XL offers 64K, sound and graphics for a fraction of the price of the BBC or C64. Now the range has been extended with the launch of the 130XE which with 128K for only £169 has great potential as a games machine.

Software titles are beginning to appear not only from the importers such as US Gold and Ariolasoft but also from Activision, PSS and Beyond.

Its clear, even to an Alderbranen tree frog, that Atari are at last going to become a major force in the UK games industry.

Transmission ends.



Ultimate Conversions

BBC micro and Amstrad owners will soon be able to explore the 3D worlds of Alien 8 and Knight Lore.

According to Ultimate the conversions will retain the graphics and animation that sent the Spectrum versions to the top of the charts.

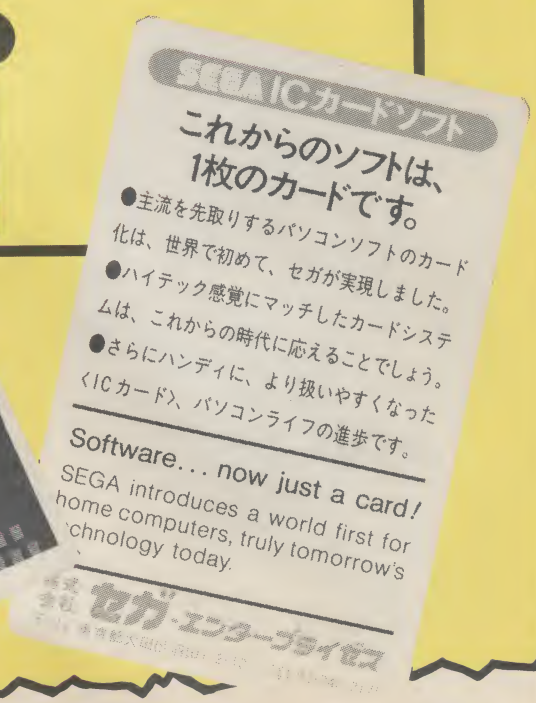
Finally Commodore 64 owners can look forward to the second in the Staff of Karnath series. It is another 3D graphical adventure starring Arthur Pendragon and is called Entombed.

Credit Card ROMs

Yet another ROM format is set to come to Britain based on a credit card style carrier, from Astar. The carrier is a plastic card with a chip and connections stuck at one end. The chip is a normal ROM or EPROM but with the large plastic package removed. A chip is normally only a quarter of an inch square, so this just mounts nicely on the bottom of the card.

The card then slots into an adaptor or interface. It is mainly designed for MSX, but there will be various interfaces for Commodore 64 and Spectrums.

The interfaces will be cheap at about £5, but the catch comes when you want to buy these ROMs, its intended that they are going to be sold for a whopping £14 to £20 each. Add those together and a normal £10 cartridge looks more inviting.



NEWS NEWS NEWS

Frankie goes to Hollywood

In the latest game from Ocean, the player has to collect the Frankie symbols in order to enter the Pleasuredome.

These symbols representing love, war, pleasure and fate are scattered through the strangest screens ever found in an action game. One of the games screens depicts a fifties style living room complete with three ducks on the wall. These ducks then attack the player who must escape through the TV screen.

During the game you will also find yourself in a kitchen, Frankenstein's laboratory and in a street preventing planes from bombing an art gallery.

Other forthcoming Ocean releases include Daley Thompson's Supertest and a game based on Roland Rat.

Beyond's Monolith

Monolith is the name of Beyond Software's new label, launched to market a range of action games.

The first game to be released is Boulderdash II which is exclusively reviewed in this month's Gamer.

Other titles to follow include Quake-1 and a Rollerball style game called Sport for the future written by Denton Designs. Quake-1 is written by Mike Singleton, the author of Lords of Midnight, and incorporates fast moving Midnight style landscapes.

Beyond themselves, plan a September release date for the third in the Midnight series. It is to be called Eye of the Moon and is expected to feature over 13000 views.

A Midnight derivative called Elindore is to be released in July and will feature 32000 animated views and over 50 "strange and mysterious" characters.

Finally, July and August will see the launch of Atari and Amstrad versions of Shadowfire, Boulderdash II and Spy vs Spy. These like the Spectrum and 64 versions, will be sold together on the same tape.

Atari 130XE

The Atari home computer system is probably the longest running saga in the computer industry — having a basically unchanged design from its original conception back in 1980.

At the time of their launch a cartridge called Star Raiders was also released. This sold Ataris in the same way that Elite sells BBCs now, and the game had a similar impact.

Since then they had the XL period and now Jack Tramiel has bought the company the XE series is upon us.

The internal architecture is changed little from the original 800. There is the same video, sound, and I/O chips — GTIA, ANTIC, POKEY. This means that all Atari software will run without modification, and the Atari has a huge software library.

The electronics are slightly different for more efficient manufacturing and then there is the RAM system.

The XE range was originally designed to be the 65XE, 65XEP, 65XEM and 130XE. Now it looks like only the 130XE will see the light of day. The 130XE has 128K or RAM.

This RAM takes up most of the circuit board, 16 chips in all. There is also a RAM manager called FREDDY (Atari always give their custom chips funny names).

The main processor is the 6502C running at about 1.79MHz. This chip can theoretically only access 64K of memory at one time (especially if you listen to Sir Clive!). So how does the XE do it?

Well, the 6502 can only access 64K at any one time, the trick is to switch it in and out when you don't need it, a concept familiar to C64 owners that has 64K + 20K + 4K of RAM, ROM and I/O. The Atari 130XE has 64K + 64K + 24K of RAM, RAM and ROM. The bank switching is just that more complex.

From Basic you will find about 40K free for Basic programs, what about the other 88K I hear you cry.

24K is inaccessable apart from machine code because this is what hides behind the 24K ROM for Basic etc. The other 64K is known as the Extra Memory. This can be brought into your programs in 16K chunks. The 16K that is dealt with is the second 16K section from $4000 to $7FFF. This is just above where the hi-res screen normally resides.

In this section of memory you can look at either the original (normal) 16K of memory or the extra memory. The extra memory (64K) is divided up into 4 16K chunks. You can then say which 16K chunk occupies the banked memory sector (am I losing you?).

Another refinement of this system is whether the main processor or the video processor looks at which memory. This means that the video procesor can use the extra memory to store all its sprites, UDG, colour, and hires data. It is now feasable to draw a number of objects in hires (you can store 8 hires screens in 64K) snd flick through them to produce faultless animation. And as well as this you get an extra 8K for your programs.

The keyboard of the XE is new, and I found it to be lacking from the XL or even the origianl 800, it is a low profile type, very similar to the Commodore SX 64 type. The function keys are sort of moulded at the top of the case and have a very 'tacky' feel to them.

The I/O ports are similar to the XL except the cartridge port is on the back of the machine (a la Commodore) and not the top. The expansion connector is missing, but to the best of my knowledge this has never been used. Instead of this there is an ECI (Enhanced Cartridge Interface) this is sited next to the cartridge port and allows the cartridge capacity to be extended from the normal 8K up to a full 64K if it ever become necessary. It includes an audio line, which must have been for the now possibly defunct music synthesizer.

The manual is a great leap forward for Atari, their manuals are usually unreadable, but this one isn't too bad. All in all for £169 (yes £169) you get an excellent machine with bags of memory and expansion options. A large user base, readily available peripherals, and a large software base. A computer that is well worth considering.

NEWS NEWS

League Champion

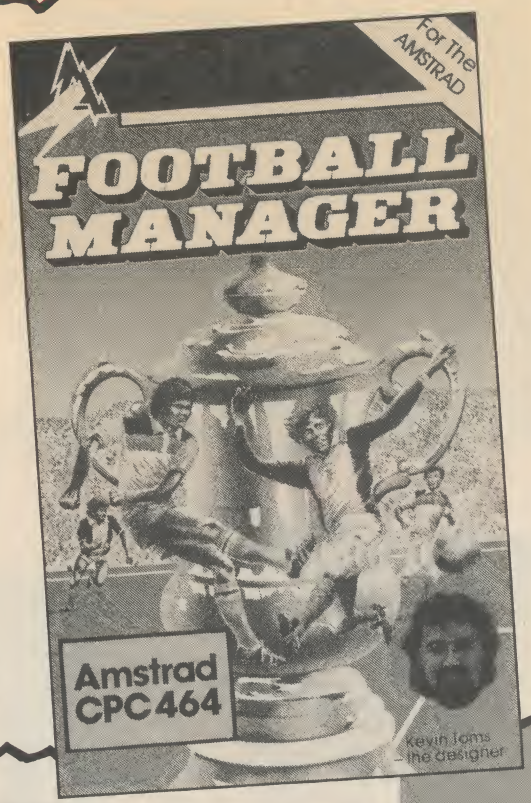
This month saw a landmark in the Britain Software industry. Football Manager has not only sold 100,000 copies it has constantly been in the charts for the past three years.

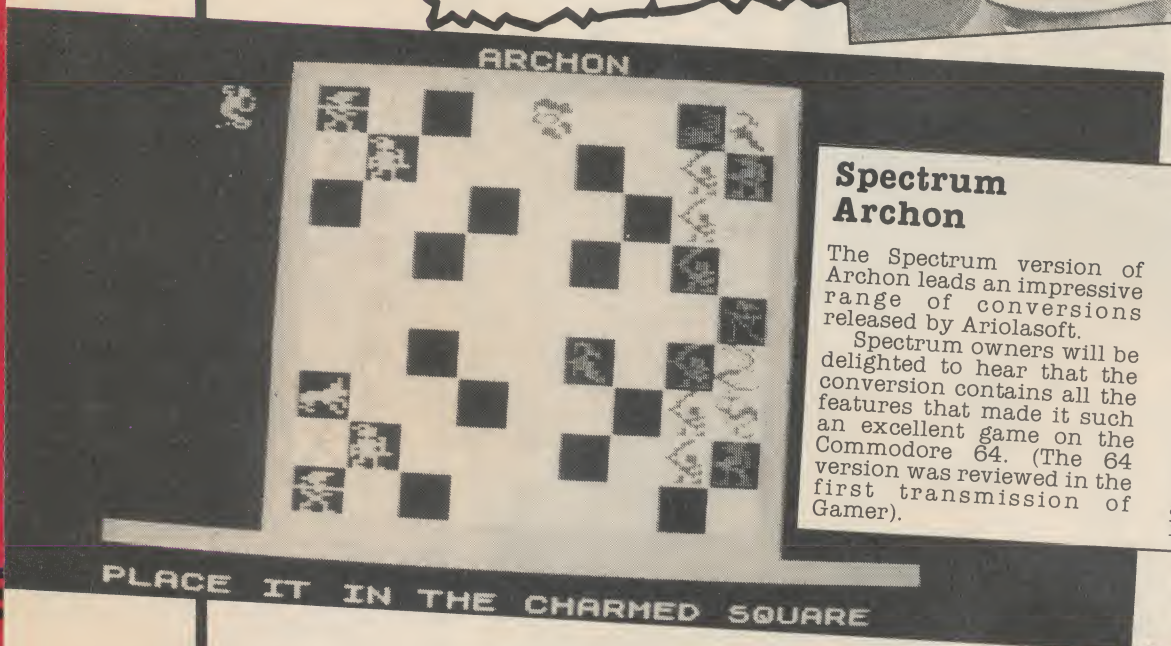
This is incredible when you consider that most games are in and out of the top twenty in a matter of weeks. It has also lasted longer than most real football managers.

It was one of the first Spectrum games that I ever bought and has been the cause of many a late night as I was tempted into playing just one more session. (One such session ended at 5am).

Now it seems set to continue as Addictive Games have just launched the Amstrad version.

Congratulations to Kevin Toms and Addicitive Games for producing a real league champion.





Spectrum Archon

The Spectrum version of Archon leads an impressive range of conversions released by Ariolasoft.

Spectrum owners will be delighted to hear that the conversion contains all the features that made it such an excellent game on the Commodore 64. (The 64 version was reviewed in the first transmission of Gamer).

The game is a chess variant where each piece is a mythical monster with its own powers. These powers are needed for if you want to take the opponents piece you have to fight it on a combat screen.

Archon is also to be available for the Amstrad and Atari computers.

Other conversions include Spectrum, Atari and Amstrad versions of One-on-one and Hard Hat Mack and an Atari disk version of Murder on the Zinderneuf.

Roland's Joysticks

The Cheetah RAT is now available for the Commodore 64. The RAT first made its appearance on the Sinclair Spectrum and consists of a sender unit that is the joystick, and a receiver that plugs into the computer.

The sender is not really a joystick but a device with a set of touch sensitive panels on the top and the twin infra-red transmitters on the front. It needs a PP6 9v battery.

The receiver unit is a small box like affair that plugs into the normal D9 joystick port of the Commodore and takes its power from there. There is a small infra-red receiver that needs to be kept in view.

The whole thing is very easy to use and can be used in either joystick port. It is a shame that Cheetah didn't include a real joystick as the one they have included seems a mere attempt at cost cutting — but to the detrement of the product...

It would be a very useful to have one of the independant joystick manufacturers such as Quickshot to produce a version for an existing proven stick — even at a higher or extra cost.

ENTREPO QD DRIVE

Cassettes are unreliable but disks are expensive. Mike Roberts finds an answer to this dilemma for C64 and VIC owners.

Cassette storage is an unsuitable storage medium for home computers. It is only with us due to economics — i.e. it's cheap. Even the ubiquitous paper tape has a number of advantages over this unsuitable medium.

On the other hand, the main competitor to cassettes — floppy disks, are extremely expensive, running to hundreds of pounds a time (they were not designed for storage any more than audio tapes were, but for data transfer, however that's another story).

The disadvantages of tape are mainly slow speed, lack of direct access (try to record at the end of a tape), and unreliability.

Disks are also unreliable, but less so, and have quantitive problems when it comes to storage space — disks are between 100K for the smallest BBC drive at around £150, 180K for the Commodore 64 at around £175, to 640K for the modified non-standard BBC drive at around £300.

The storage media (ie. the disks) all weigh in at about £2, though some people will try and rip you off with prices up to £4 for a single disk. Price is no guide to quality.

When you come to tapes, at £30-£40 tape deck and a £1 CPO will store about 300K.

As I previously mentioned, both these data storage devices were never originally designed for data storage, so getting down to the crux of the matter, the Wafadrive is.

What is a Wafadrive?

Everybody has heard of the infamous Sinclair Microdrive, an attempt to provide a fast disk alternative. However it failed to live up to its claims, was unrelibale, slow, had a low data capacity, and was badly supported by software houses.

Now a group of multinational companies headed by BSR/Astec (famous for their power supplies and modulators) and Entrepo have, over the last few years, developed their own wafer or continuous loop tape system. The system is, in concept, similar to all 'stringy floppies' that have been developed. A loop of tape that is joined at the ends. So that if you want some data that is at the beginning of a tape and read head is just past it, it will wind on past the join until it is in the appropriate place to read it again. So direct access is possible. The big unreliabity problem comes with the spooling method. When you have unravelled the tape, you have to shove it back onto the spool again. This is where the Sinclair devices fall down, at this point, after continuous use they get all munched up — losing all data, programs etc.

The Entrepo units do not have this problem, due to a highly developed tape system, lubricants, and various other systems to keep the tape tight.

In Britain the system first saw the light of day with the Rotronics Wafadrive about a year ago, for the Spectrum. The unit since went on to win the CTA 'peripheral of the year' award.

However, other computer owners will not have to suffer any more. Dean Electronics are now importing the Quick Data Drive from Phonemark for the Commodore 64 and VIC 20.

The unit is very small indeed and is a lot smaller than the standard tape deck. Like the tape deck it plugs into the cassette port and requires no extra power supply. Quite a change from the heavy and large disk system with all its trailing wires.

The QOS (Quick Operating System) needs to be loaded so that the Commodore 64 can use the new system through the tape port. This is done by inserting the operating system wafer and hitting run/stop (where have I seen that before!) the QDD will emulate the tape recorder and load in the program at normal tape speeds. This obviously takes a while as 'normal' tape speeds are very slow indeed.

When booting has taken place the commands LOAD, SAVE, VERIFY, and the file handling commands all work through the QOS and go directly to the wafer at high speed.

The QOS does take up memory space though, and the 4K of spare RAM from $C000 is taken over. 4K from $A000 is also taken, but this is banked under Basic and is not normally used by the Basic user.

For normal disk-type commands a separate program needs to be loaded, called a File Management Utility. The FMU provides tape to wafer, wafer to wafer, disk to wafer, and most other combinations of copying. It does not copy protected files.

The FMU also provides a directory display, formatting, system creation, and clean drive (this needs a cleaning wafer). It is a shame that these essential functions could not be provided in a permanent command driven environment.

On the whole the QDD is a very good alternative to tape, whether it will challenge disk or not is another matter as the price of disks is falling. The QDD is currently supported well by American software houses and there is a lot of imported software available for it.

If the price drops to significantly lower than disks this will be well worth getting.

20% Off Kempston Joysticks

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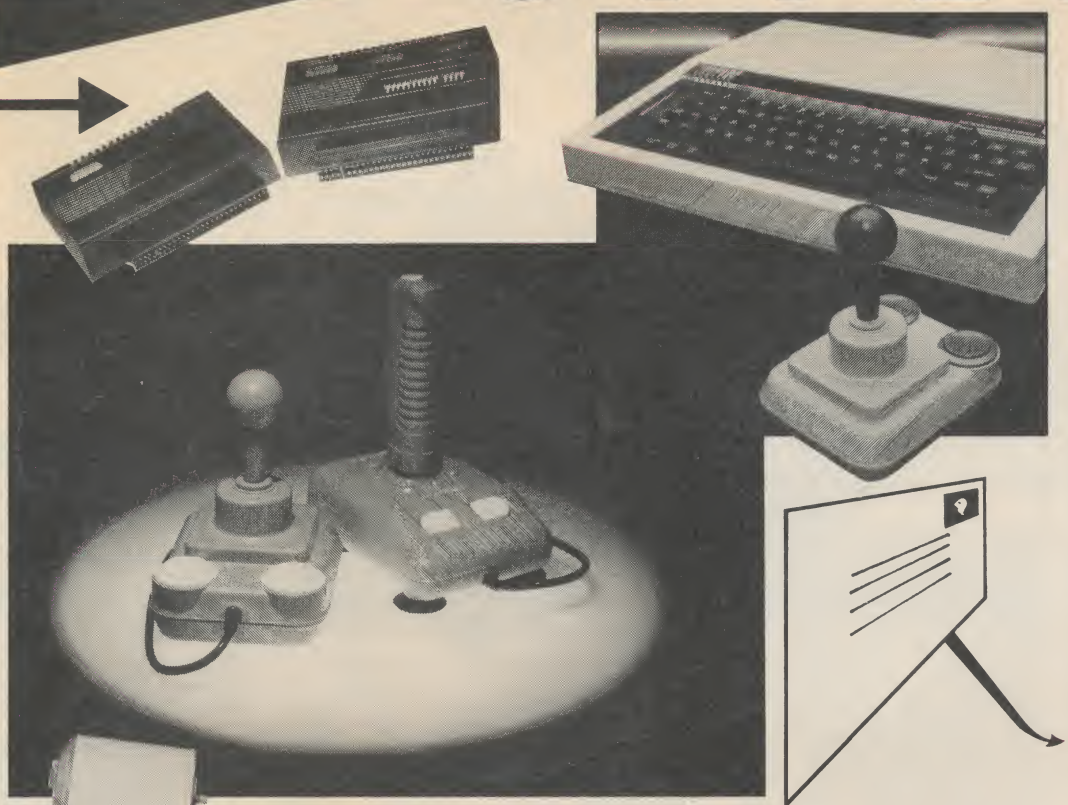

This month Computer Gamer readers can save pounds on joysticks through our discount offer.

Not only can you save over £3 on the Formula one joystick, that was rated highly in last months survey, but also there is money off a whole range of other add ons. These include joystick interfaces for most micros and even centronics printer interfaces for Spectrum owners. All at a 20% discount!

All you have to do to take advantage of this offer is to fill in the coupon below and send it along with a cheque or postal order to:
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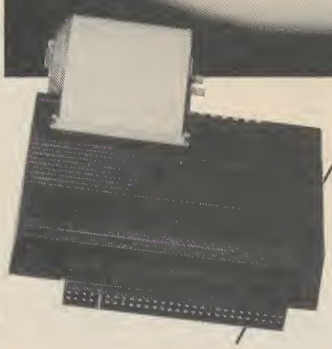

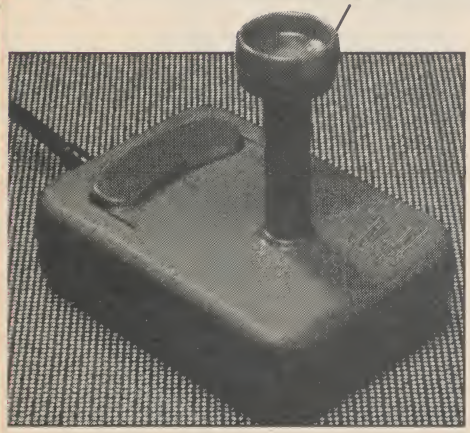

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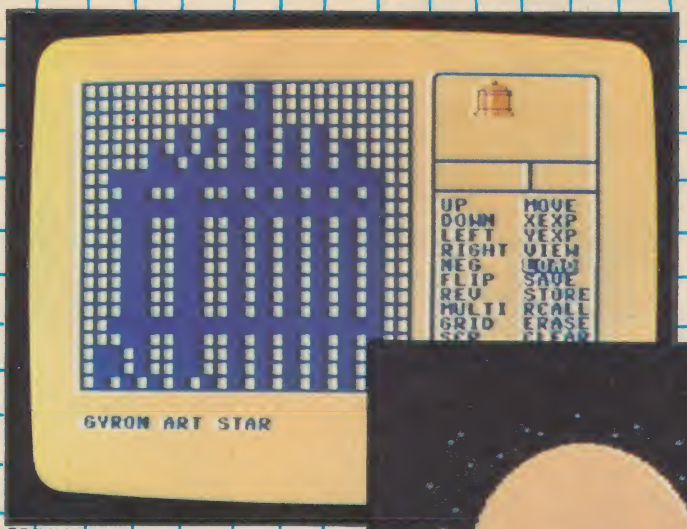

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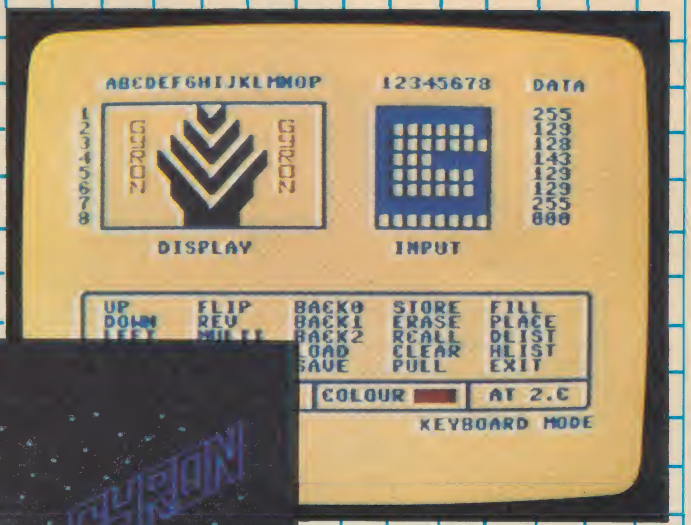

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GALLUP CHART 10

1	Soft Aid	Various
2	World Series Baseball	Imagine
3	Ghostbusters	Activision
4	Brian Jack's Superstar Challenge	Martech
5	Spy Hunter	US Gold
6	Gremlins	Adventure International
7	Impossible Mission	CBS
8	Football Manager	Addictive Games
9	Daley Thompson's Decathlon	Ocean
10	Bruce Lee	US Gold
11	Air Wolf	Elite
12	Combat Lynx	Durell
13	Moon Cresta	Incentive
14	Blockbusters	Macsen
15	Rocket Ball	IJK Software
16	Pole Position	Atari
17	Finders Keepers	Mastertronic
18	Sorcery	Virgin
19	Hunchback	Ocean
20	Radio Over Moscow	US Gold
21	Pitstop 2	CBS
22	Mini Office	Database Publications
23	Death Star Interceptor	System 3
24	Flight Path 737	Anirog
25	Dragon Torc	Hewson Consultants
26	Jet Set Willy	Software Projects
27	Alien 8	Ultimate
28	Mr Freeze	Firebird
29	Vegas Jackpot	Mastertronic
30	Formula One Simulator	Mastertronic
31	Hunchback 2	Ocean
32	Manic Miner	Software Projects
33	Castle Quest	Micro Power
34	Chiller	Mastertronic
35	Grand National	Elite
36	Chuckie Egg 2	Software Projects
37	Everyone's A Wally	Mikro Gen
38	Elite	Acornsoft
39	Zaxxon	US Gold
40	Starion	Melbourne House
41	Fighter Pilot	Digital Integration
42	Breakdance	CBS
43	Pyjamarama	Mikro Gen
44	Skooldaze	Micro Sphere
45	Wizards Lair	Bubble Bus
46	Rockman	Mastertronic
47	Booty	Firebord
48	Emerals Isle	Level 9
49	Match Day	Ocean
50	Tower Of Evil	Creative Sparks

Spectrum Top 10

1	Soft Aid	Various
2	Spy Hunter	US Gold
3	World Series Baseball	Imagine
4	Moon Cresta	Incentive
5	Gremlins	Adventure International
6	Finders Keepers	Mastertronic
7	Bruce Lee	US Gold
8	Brian Jack's Superstar Challenge	Martech
9	Dragon Torc	Hewson Consultants
10	Alien 8	Ultimate

Commodore 64 Top 10

1	Soft Aid	Various
2	Impossible Mission	CBS
3	World Series Baseball	Imagine
4	Brian Jack's Superstar Challenge	Martech
5	Air Wolf	Realtime
6	Rocket Ball	Centresoft
7	Pitstop 2	CBS
8	Pole Position	US Gold
9	Gremlins	Adventure International
10	Ghostbusters	Activision

BBC Top 10

1	Castle Quest	Micro Power
2	Elite	Acornsoft
3	Combat Lynx	Durell
4	Blockbusters	Macsen
5	Football Manager	Addictive Games
6	Mini Office	Aardvark
7	Manic Miner	Software Projects
8	Wizard's Ore	Imagine
9	Micro Olympics	Micro User
10	Brian Jack's Superstar Challenge	Martech

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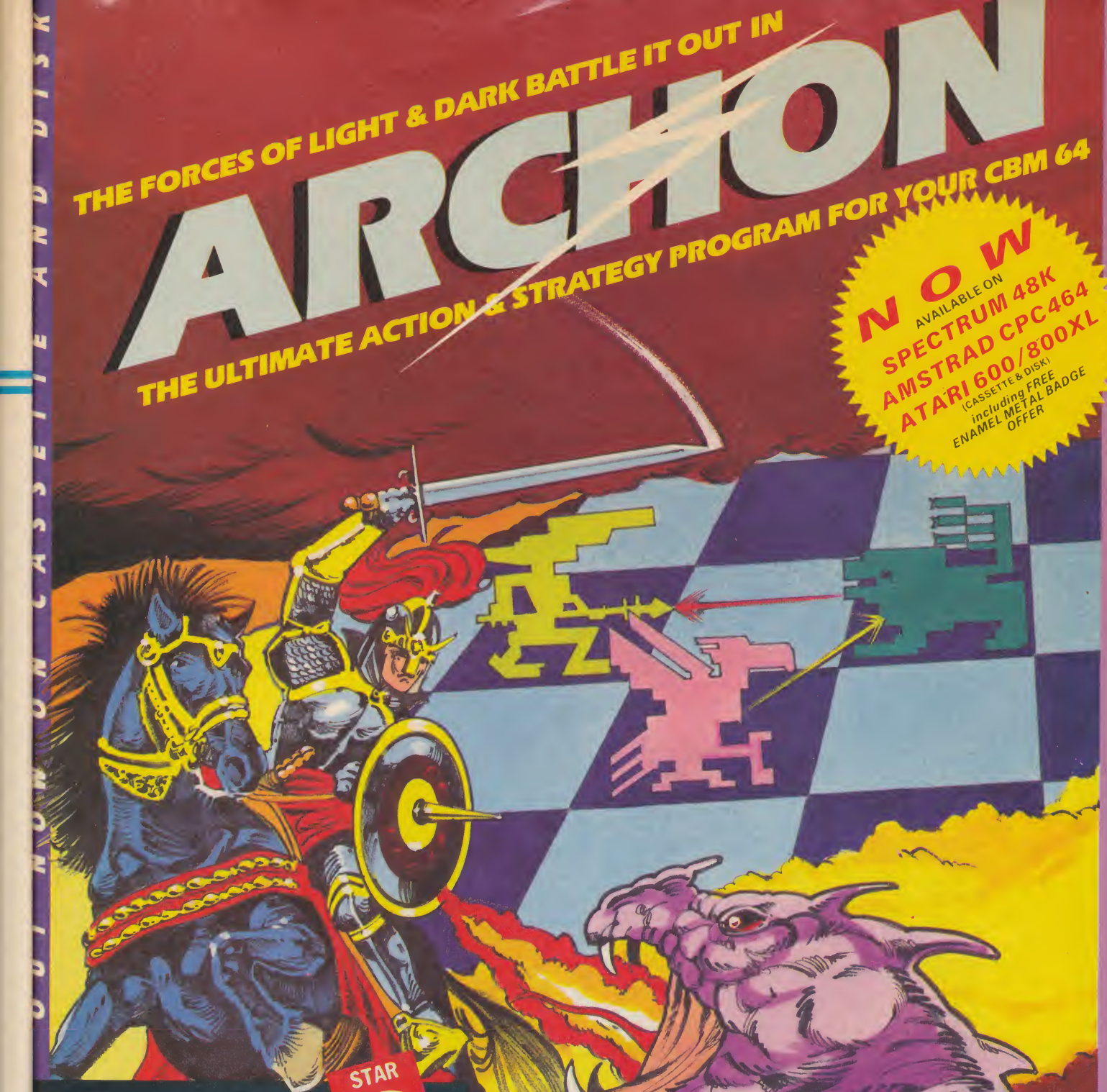

STAR GAME

ARCHON is brilliant. There's something in it for all games addicts; arcade, adventure and strategy are all here. My only complaint is that it's best played against a human opponent – the computer's just too good and you can't give it a handicap.

Bryan Skinner
Personal Computer News

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THE -F-O-U-R-T-H- PROTOCOL

With only days to foil a Russian plot to explode a nuclear bomb in Britain, Gordon Hamlett is seconded to MI5 to investigate.

Imagine the outrage if a small nuclear device exploded in Britain. As MI5 agent John Preston, rumours have reached your desk that someone is planning to do just that and you have only a limited amount of time to find out exactly who is going to do it, how and where.

Frederick Forsyth's latest thriller is the basis for this game from Hutchinson. The Fourth Protocol is a secret agreement signed by America, Russia and Britain back in 1968. Briefly, it states that none of the signatories can introduce a nuclear device into the territory of another signing nation. So far, no-one has tried — until now.

The date is 1987, a few weeks before the general election. Experts in Moscow have decided that if the Labour Party is returned to power, they can control the government to such an extent, that over the next few years, Britain will withdraw from Nato, allow a Russian invasion and so pave the way for a Soviet takeover of mainland Europe. The problem is to guarantee the election of Labour. Thus plan Aurora is hatched. The idea is to explode a small nuclear bomb and use their disinformation services to blame it on the Americans. This should ensure that enough people switch their allegiance to the only partly committed to Unilateral Disarmament.

The game is a three part adventure game, the first two parts being icon/menu driven with part three being text input with some arcade-type sequences. In part one, you have to uncover a traitor within your ranks. This leads to part two where you have to discover exactly where the bomb is hidden and so to the final part and the actual defusion of the bomb. The three parts must be played in order as successful completion of parts one and two yields a password allowing access to the next instalment.

Whilst you are settling into your new job as head of C1(A), responsible for security of Goverment buildings, a diamond robbery is taking place. The burglar discovers that he has got away with more than he bargained for and amongst his haul are some top secret Nato documents. Being a good patriot, he sends them anonymously to the Ministry of Defence and this is where the game starts.

Most of part one consists of information gathering from within your office and the icons on the screen depict varying functions that you can access. The icons are selected by moving a pointing finger round the screen and pressing the return key. Most of the icons, once selected, lead to a window full of further options. For example, selecting the picture of the telephone, gives you four choices: make an outgoing call (you are prompted for the number), listen to an incoming call, put the telephone on hold (so that you don't lose a call of you are doing something else) and return to the main screen.

The icons are large, very well drawn and mostly self explanatory. The telephone has already been described. The filing cabinet is used for storing memos and reports that you have accessed. The video camera allows you to put a surviellance team (watchers in the jargon) on to a suspect. The cassette lets you save different positions whilst the graph gives you details of your current prestige and how much of the game you have solved.

You have only forty days to solve part one of the game and the calendar charts your progress. Each "day" takes two minutes of computer time but once you have solved the early parts of the adventure, you can use the calendar icon to advance the date more rapidly.

The three VDUs across the bottom of the screen are your main sources of information. Normally blank, symbols appear on the screen when there is something for you to read. From right to left, these are memos, reports and sitreps (reports from your watchers). Accessing one of these terminals gives you options to read, file or throw away the report. As the game progresses, more and more pieces of paper land on your desk, all of which need to be acted upon in one way or another. It's nice to know that even occupations as supposedly glamourous as spying have their problems with bumf.

So to the game itself. As mentioned earlier, your main

So to the game itself. As to the game itself. As mentioned earlier, your main task is to find out who has been leaking the Nato documents. But your job is concerned with all aspects of security in Government buildings and other people will want you to sort out their problems as well. Some of these other jobs will give you additional clues whilst others are merely designed to waste your time.

Having read the messages congratulating you on your new appointment, it is time to get down to some serious work. You soon discover that a young civil servant called Abbs is reportedly seeing a foreign national so you decide to put some watchers on her and see what happens. It is worth looking up the file called "telephone" at this stage as it gives you some important numbers of use later in the game. The most frequently used of these

numbers is the one for Blenheim — one of the other MI5 offices. By phoning them, you can get their files transferred to your office — providing of course that you know the name of the file that you want.

Another thing you will have to find out pretty quickly, is exactly who had access to the leaked documents in order that you can check up on them and eliminate as many suspects as you can, as soon as possible.

No spy story is complete without its secret codes, and Fourth Protocol is no exception. Memos come through at regular intervals telling you what the latest password is. You need to know this before you can access any of the files at Blenheim. Being security items, the passwords are not written down as such, but given to you in code. These have to be decoded using the one time pads which are included in the packaging of the game as a playing aid. These pads consists of an array of letters which are used to turn numbers into sequences and are in standard use amongst intelligence services throughout the world by virtue of being almost unbreakable.

Not all your time is spent in the office. A request comes through for you to install a security system at Building 17. When you get there, you are presented with a blueprint of the building and have to decide where to put security locks. If you do not get it correct first time, you get summoned again and again until you do. Getting annoyed with this, I put locks on every single door in the building. This resulted in a rather terse memo stating that they didn't know about what happened in London, but where they were, toilet rolls were not considered a security item and the union were threatening to go on strike if the locks weren't taken off the toilets pretty quickly!

As you complete different actions, so your prestige varies for better or for worse. The lower it gets, the fewer watches you will have at your disposal and so subsequent tasks become that much more difficult. The sort of thing that would affect your prestige would be the potential defection of a foreign diplomat. If you get him quickly enough, your prestige goes up as he tells MI6 everyhting he knows. If you don't get him in time, he defects to the Russians and down goes your prestige.

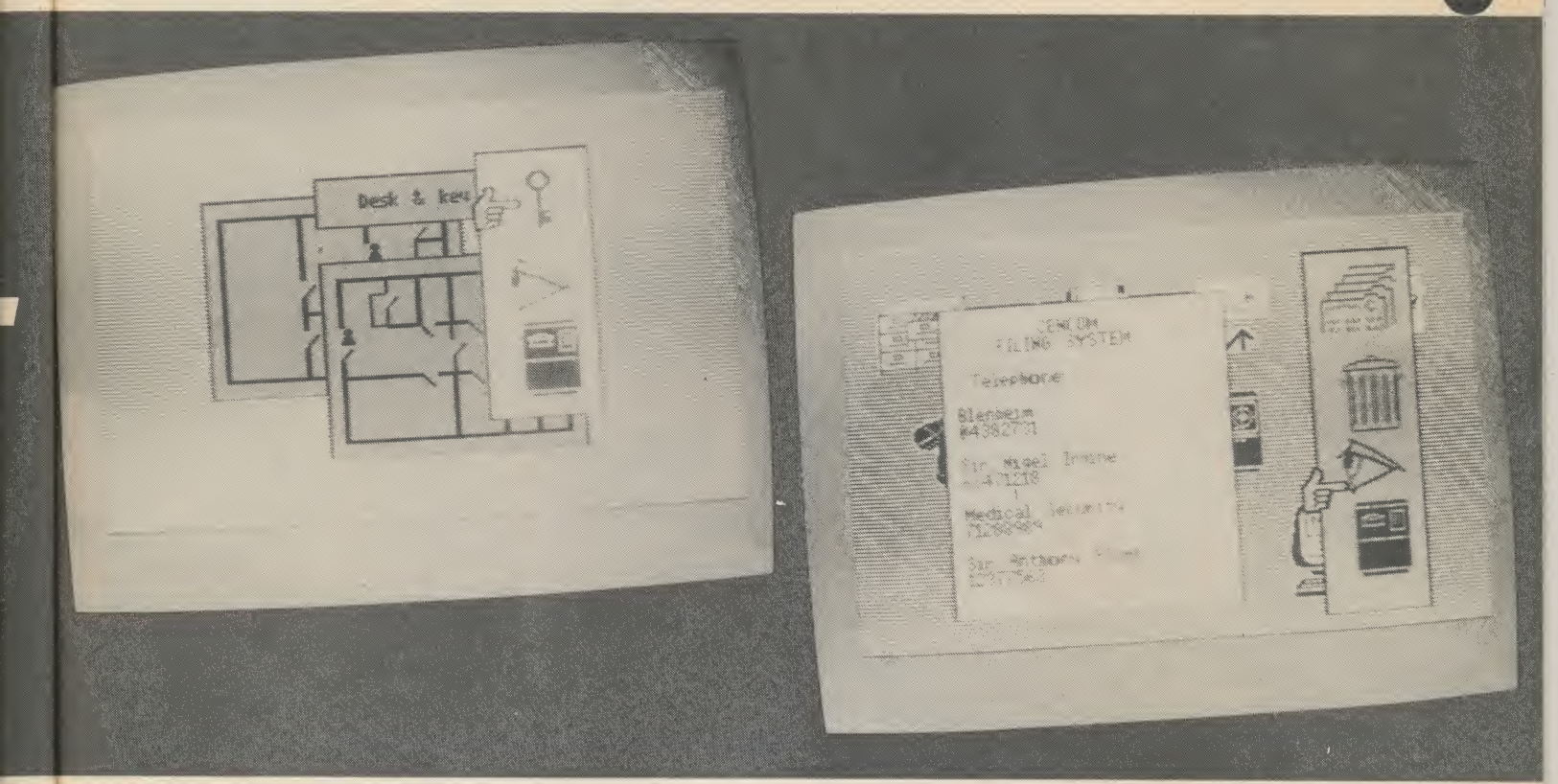
There are about fifteen different plots going on throughout the course of part one although you will not be aware of them all. Some are vital, some give subsidiary information and others are total red herrings. The way the plots fit together is cleverly done and there is a real feel of being there, especially with the variations in the memos and reports that you get. Unlike other adventures, where you have to go and look for things, here things come to you. Of course, you then have to act on them, but there is always something going on. You will have the opportunity for making voice print analysis, using the remarkable talents of Blodwyn with her incredible memory for faces and liaising with other security services, both your own and foreign, in your search for the traitor.

When you think you know who has been giving our secrets away, you have to convince the Paragon committee which has been set up to investigate the leaks. This involves answering a series of questions on who did it, how was he recruited, by who and what evidence there is. If you get everything correct (and be warned, it's not that easy) you get a password which allows entry to part two. If you get it wrong, the game continues but with an enormous dent in your prestige. If you do not successfully solve part one, the game ends automatically afer the forty days have elapsed.

Your objective in part two is to discover the location of the bomb. Again, it is an icon driven adventure, but this time there is a lot of travelling to be done and there are about 175 locations to be explored. The utility and assessment icons are the same as in part one, but several new ones are introduced. Communicate allows you to use the phone or talk to someone and wait is used to advance time. Manipulate lets you take, drop or use an object while look leads to a choice of examining an object, reading something or taking an inventory of your stock. The final icon is the one that enables you to move around. This gives a comprehensive choice of actions ranging from getting in a tube or taxi to entering a lift or following someone.

To start with, you will need to visit various MI5 buildings in order to equip yourself with ID, money etc. You will also meet a Q-type figure (to pinch a character from James Bond) who may be able to help equip you.

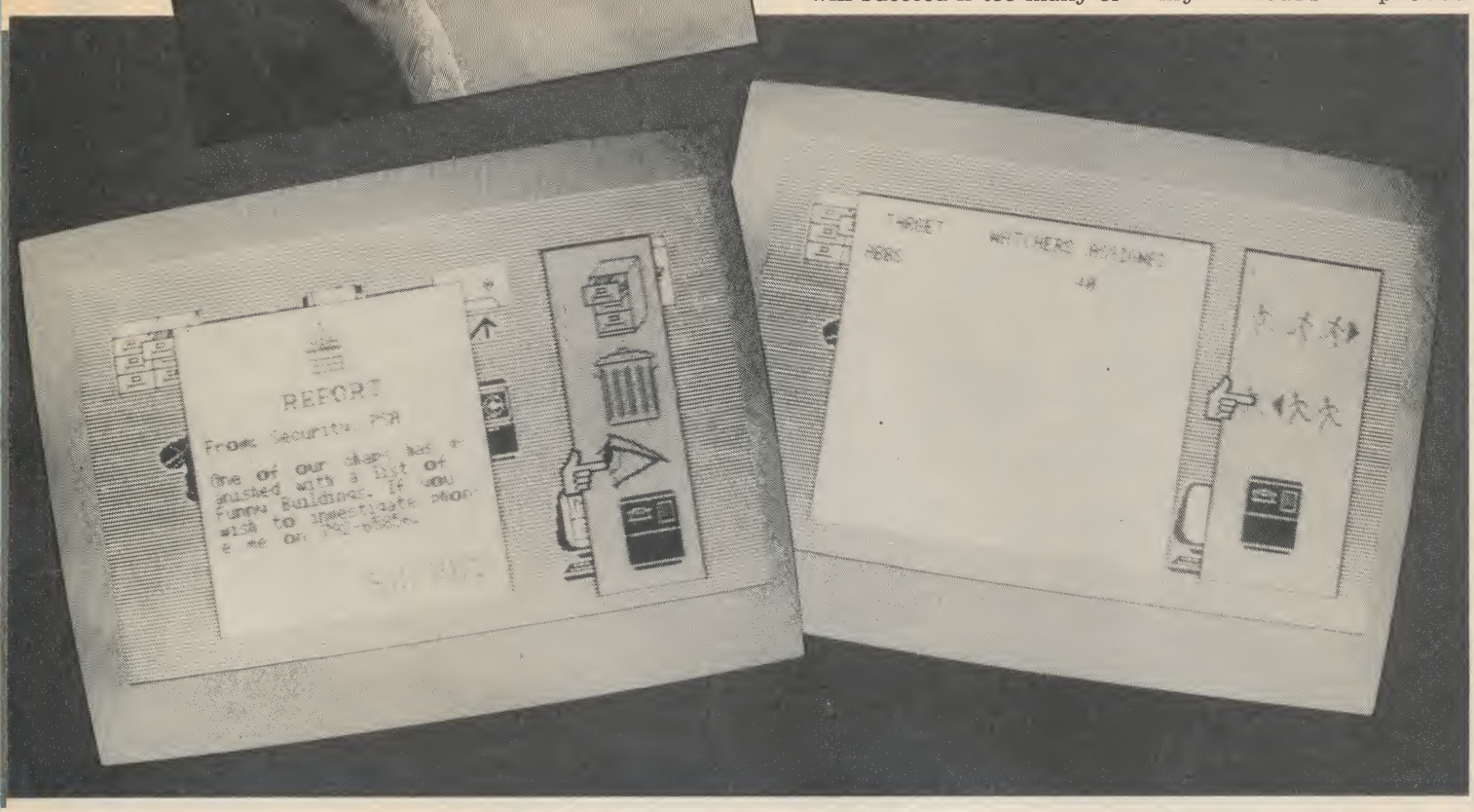
As you move around the country, following a group of terrorists that you have had a tip off about, you will find you way impeded by rail strikes and the like. Plus, of course, the fact that you never have the right to pass a piece of equipment at the right time. You have to do all your own legwork in this part, no teams of watchers to help you out here. As in part one, successful com-



raid on the building. You must arm the six soldiers at your disposal before sending them into the building for a shootout with the KGB thugs. This is depicted as a Berzerk style game with both sets of agents dodging round the furniture in an attempt to kill each other. Only when all the Russians are dead are you allowed into the room with the bomb.

The 64 version puts your straight into the room with the bomb, with the battle raging around you. This is a graphical adventure with text input. The KGB can still find you if you don't take sufficient precautions but will not however shoot you for fear of detonating the bomb. They will try to overpower you though and will succeed if too many of everything before it reaches zero starts to mount. If you get the correct sequence, you are presented with three wires to be cut. You cut one and still the clock keeps ticking. . .

Fourth Protocol is the first serious attempt at a game based on a spy story that I have seem and it works very well indeed. The use of icons makes the game a lot friendlier to use than text input and the storyline flows well and maintains a high level of excitement. This is due in no small way to Frederick Forsyth. I read the Fourth Protocol before playing the game and was more than a little worried that the game would not do it justice, but my fears proved



pletion of part two gives you a password for part three. The task must be completed within a certain number of moves although this is fairly lenient and so you don't have to follow an exact course.

All that remains now, is the small matter of defusing the bomb and it is in this part that the Spectrum and 64 versions differ considerably. The original specification of the game called for an arcade game in part three, but the writers — the Electronic Pencil Company — felt that this would destroy the feel of the game. The Spectrum version was so far advanced though, it was decided to leave the arcade element in. Having found the location of the bomb in part two, you have to plan an SAS them get near you.

The bomb is hidden inside a cabinet and your first problem is to find a way into it. This requires a combination number that you should have come across earlier in the game. Any other attempt at opening the cabinet, such as a hefty kick will result in the bomb detonating prematurely, and you going up in a mushroom cloud. Once the cabinet is open, the bomb is revealed, together with a series of flashing lights. These have to be pressed in the correct sequence. Again, you should have found this out from earlier in the game, but it is not too difficult to work out. All the time that this is happening, a clock is ticking away, and the pressure of trying to do groundless. The weakest part of the game is the third part and there is a feeling that it has only been put in to let the player see the plot through to the end. The part that will get everyone talking though and discussing it with their friends is part one, which is highly original and extremely well implemented.

The Fourth Protocol is published by Hutchinson for the Spectrum and Commodore 64 and costs £12.95.

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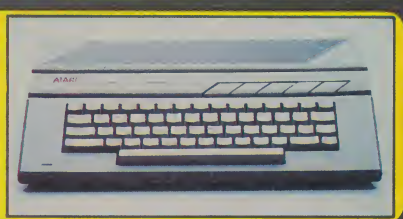

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Splendor Blast

Once again Computer Gamer's intrepid explorers find themselves with bleary eyes, aching wrists, and stiff necks.

As always Mike Roberts (words) and this month Steve Phipps (pictures).

The first game that struck me as being rather special is called Splendor Blast. The initial impression is a cross between Pole Position and Zaxxon, though of course it's nothing like it.

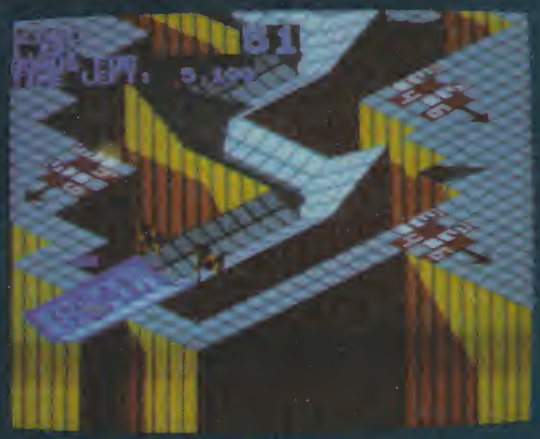
The game is based on an intergalactic race. You start off on the Earth and race to the Moon, then to the Sun, then Orion, and so on. You are represented by a small space ship in the centre of the screen. The terrain rushes up to you in an excellent 3D effect.

En route you must pick up energy and extra missiles. You need the missiles to blast away objects you cannot avoid. On every run you can dock with one or more equipment ships, these can give you a shield that prevents you destroying yourself, a turbo that increases your speed (to such a rate that the ship becomes almost uncontrollable), and a side thruster that vastly increases your manoeuvering ability.

In all a great game that you can play for some time on your 20p. Digressing from space ships comes Bank Panic. Bank Panic is basically a reaction time game. You play the security guard of a bank and can switch your field of view between 12 doors, seeing 3 at a time.

A sort of scanner on the top of the screen tells you when somebody is approaching a door. If it is a robot you must shoot him, if not then you let the person deposit their money in peace. They get rather upset if you shoot them.

There are a number of variations in later levels, with customers being held hostage, so you have to be quick to shoot the robber as



Marble Madness

Sprint Start

he jumps out from behind them.

Colourful and humurous graphics make this an enjoyable, if simple in concept, game.

The latest game from Atari is a full 3D golf game. I'll describe the controls first as they are rather complex.

There is a club select button that cycles you through the half set of clubs. An aim button that enables you to alter the direction of swing. A set of addressing buttons to alter the way that you hit the ball, repeatedly pressing the high or low buttons changes your stance, likewise the intention to hook or slice the ball. These changes are represented by a plan view of your feet, the ball, and your club.

Lastly there is the hitting strength control; This is a sort of sprung metal bar that you bend — that's the best I can describe it as, though you might think different if you see it.

The screen display needs to be seen to be believed. The left of the screen is taken up by a plan view of the fairway, including all obstacles and the wind direction.

The top of the screen is taken up with the score and card and the direction indicator. But the best thing is the full 3 dimensional display of the view you would have if you were standing dirctly behind the player. This view needs to be drawn every time you move and takes about 5 seconds, rather slow for a dedicated arcade game, but the sight is worth it.

The hardware doesn't seem to be able to generate the number of colours tht some of the more advanced games can. So the trees are built up by shading and mottling — even so the effect is stunning.

The game can be played in two ways, single play in which you play until you go so over par that the computer chucks you off. And half round, where you play a round of 9 holes. Two people can also compete against each other.

Another game that struck me as very good — it also did my arm in from too much play — was Marble Madness. In this you guide a marble via a tracker ball around various obstacles and into a goal against the clock. The graphics really are incredible and the music has to be heard. You can get an idea of the graphics from the photograph, but the music is another story.

I could only get to level three — anyone done better?

A couple of games that warrant a small mention are Midstream and Field Combat. Midstream is a game that is like a larger than life Scramble set under water with some good graphical effects, otherwise it is very similar in action and gameplay.

Field Combat reminds me of Frontline from a couple of years ago. You control a sort of tank/spaceship affair and can missile or capture enemies can then be turned on your foes. Quite good but very difficult to get the initial hang of.

A video thing that cannot really be called a game is Sprint Start. It is a screen attached to an exercise cycle. The video display displays a great deal of status information and a graphical view of you and the opposing computer bike.

An interesting point to note is that it initially says that you shouldn't use it if you drink, are old, or have a heart problem!

As a side note, and considering that this is the June issue. A dealer I know on the south coast reckoned that the dedicated arcade game market goes in 3-4 year cycles, he says that this year is one of those peaks, and more machines are going into more arcades than ever. So if you are reading this on a beach somewhere, go around the corner to that arcade and have a look at what I've been talking about.

As always I'd like to express my thanks to all at Dieth Leisure for their help, assistance, and putting up with us.

A graphics package and a games designing aid for only £7.95! Tony Hetherington looks at the state of Spectrum art.

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Often the only difference between a good game and an average one lies in the programs graphics. Up to now, we have only been able to grasp in awe at the 3-D graphics created by the likes of Ultimate, but now through Leonardo, even I, can create Knight Lore style 3-D displays.

Leonardo isn't the first, nor will it be the last graphics package for the Spectrum but it surely is the most comprehensive to date. For not only does it have the usual array of line drawing, circle and fill commands it has an impressive array of additional features that distance it from the rest. It is on these additional features that I will concentrate in this article.

Although Leonardo is simple to use it takes some time to learn how to use its many facilities. Indeed the program is accompanied by a 100 page manual which includes examples and exercises to illustrate some of the more involved commands. Thankfully the booklet also includes some keyboard charts to show which operation is accessed by pressing each key. This is vital since many of the keys have three or four operations associated with them. A keyboard overlay would seem an abvious answer however I'm afraid the Spectrum plus has put paid to such luxuries. However, I soon found that I could remember enough of the keys to allow me to begin drawing without diving for the booklet at every turn.

The programs routines are efficient and well thought out. The whole screen is occupied by the drawing screen and so you can create full screen images. Should you require a special function, for example a circle, then the bottom half of the display gives way to user friendly prompts asking for the radius and so on. Once the function is completed then the full drawing area returns.

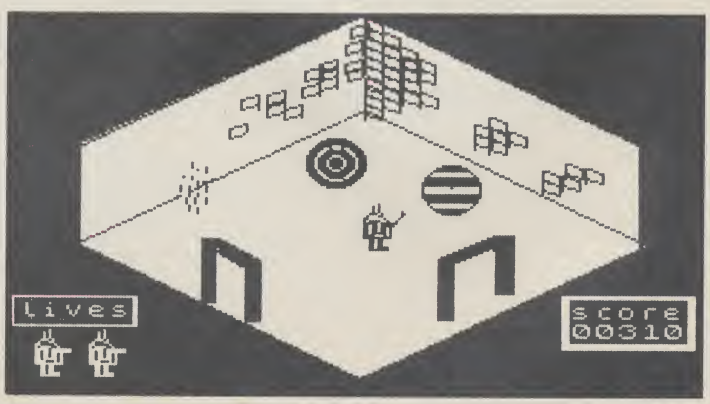
Many users will first plan their work on graph paper before committing it to screen and will therefore benefit from a small but useful display that shows the co-ordinates of the cursor. This can be toggled between the top or bottom of the screen so that you can always see the area in which you are working.

Such forethought, while commendable, isn't as necessary with Leonardo as it is with other graphics packages. For drawings can be easily erased, copied or even scrolled across the screen to the desired location.

Infact, Leonardo seems to have been designed for the lazy artist. If for example, you decide you need a crowd scene for a football game. Such a prospect would be intimidating, but not with Leonardo. All you have to do is draw one scarf-waving fan. This is saved as what Leonardo calls a picture element. This can be any defined window of the screen and up to 255 small elements can be stores at any time. We can then use our fan as the brush and literally paint fans on to the screen. By carefully setting some additional parameters they can appear to stand behind one another making a realistic display. Store two or three types of fans and the crowd scene becomes ever more realistic. What is even more impressive is that the picture takes minutes not hours to create.

Leonardo stores the picture elements on its backup screen which can also be used to store up to 774 UDG's or an entire backup screen. Unfortunately not all three. However you could create the images, elements and UDG's that you may need in your program in stages and save each to tape. They can then be loaded into your own programs.

Colour is added to pictures as in other graphic programs and not even Leonardo can solve the Spectrum's attribute problem that cause colours to smudge. However it can help by allowing you to paint on the colour as and when required. You can



also swap colours and even scroll the colour across the screen.

Programmed drawing is Leonardo's most impressive feature it is also the most difficult one to understand and use well. However its resulting effects are well worth the struggle. Basically it consists of two stages. In the first stage you define up to nine co-ordinates that will be used to draw a 3-D image which is then used in the second stage. Here the fun really starts as you can define a number of parameters that will draw a series of the images. However each one can be magnified slightly, or rotated by any angle or both. You can also use picture elements or just a simple brush consequently we could draw our football fan doing handstands into the distance.

As you can see you can combine Leonardo's facilities to produce an immesurable number of effects and images. Indeed it will take months to discover all of the different permutations.

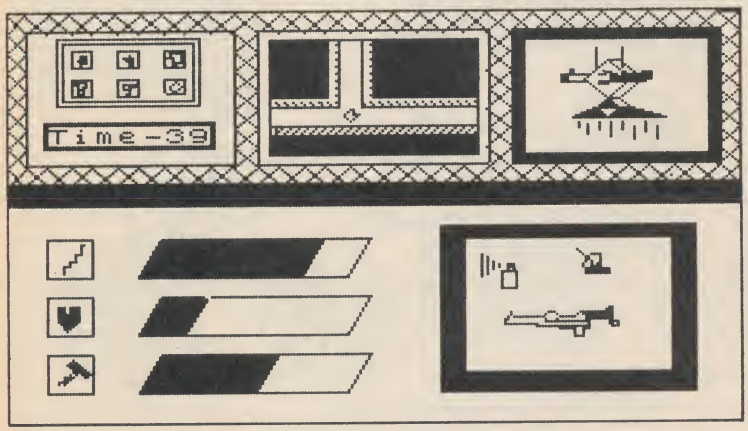
Most graphics packages help you create pretty pictures but then leave you wondering what to do with your creations. Leonardo solves this problem by including five machine code routines to allow you to use your artwork in your own programs. Each is a subroutine of a Basic program and is easy to use for all you have to do is define two or three parameters. These routines transform Leonardo from a graphics package to an invaluable aid to games designers.

The first transfers either whole or part screens to the display from graphics screens held in memory. The second is used to print stored picture elements anywhere on the screen, over the background or merged with it. Similarly blocks of UDG's can be printed or merged by using the third routine. The last two routines are used to swap between alternate character sets.

To fully test the games designing potential of Leonardo I set out to design two different games, the first a Knight Lore style, multi screen arcade game, the second a Shadowfire style, icon driven, adventure.

Designing the arcade game was easier than I first imagined when I realised the potential of the first user program. This allows you to move one or more thirds of a screen image on to the screen display. Therefore if you make your screen images interchangeable you greatly increase the total number of screen available to the game. For example the top third of one screen becames the bottom of another but the middle of a third screen, and so on.

Once the background has been created animated figures and monsters can be added by using blocks of UDG's. The whole game can be completed by the addition of a score and lives display that can be printed in an appropriate character set.

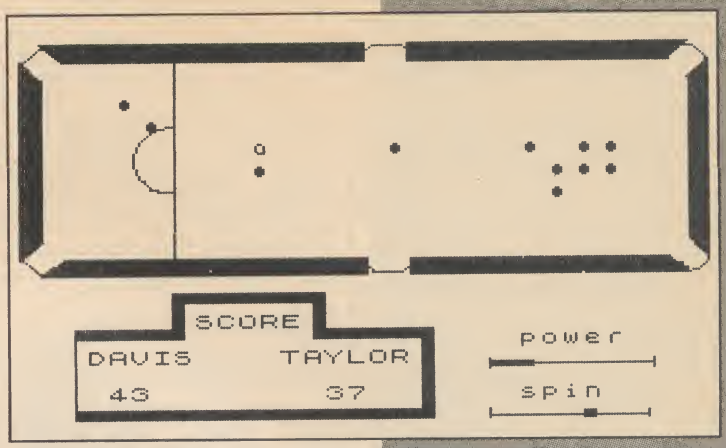


Designing such a game involves dividing up the Spectrums memory into graphic and screen stores and loading in the Leonardo designed graphics into the required areas. Then your program would set the subroutines parameters so that they draw the required graphics from the appropriate area of memory.

This is no doubt daunting to first time games designers who will probably use Leonardo to create backgrounds that are then fed into programs such as the HURG games designer which is published by Melbourne House.

However no such program exists to help design the Shadowfire style adventure game. This mainly consists of one main screen display and a number of picture elements.

In this example you must control your crew members who must find and catch a number of aliens that have escaped from the ships zoo. These animals are of course dangerous and will fight back.



The first job was of course to draw the main control panel display leaving spaces for a character select icon, a display showing the area of the ship that the character is in and so on.

Next the map of the ship was drawn, which occupied a full screen that was then divided into picture elements that could be displayed, as and when required.

Finally the rest of the display consisted of blocks of UDG's which had to be created and stored separately.

The game itself was easy to program as it didn't require any animation merely the correct element of UDG block printed in the right place at the right time.

In time I will improve both games by perhaps adding further screens to the second one or change the arcade game to a platform game.

Luckily since Leonardo takes the hard work out of drawing the graphics I can concentrate on trying out new ideas.

If I was to try and find fault with this program I would say that it lacks just one important feature. That is the ability to magnify the area that you are working on. For it is far easier to accurately draw large pixels than it is to stare at little dots on the screen. Finally it would have been nice to have been supplied with a library of predefined picture elements to get you going. However this is only a minor gripe as you can rapidly collect your own. For example some of the animals in the zoo adventure may soon be crawling over the 3-D rooms of the first game.

At only £7.95, Leonardo is a must for all Spectrum owners.

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P·U·Z·Z·L·E·S

We, the Guardians have returned as promised. Time grows short and our search for one among you continues. Already you have received our bulletin which has introduced you to our journey, and now we must begin. Remember, your score is important, and the total will help you to discover our identity — but there will be other ways not yet known. You may already have accumulated 200 points, but this is trivial compared to that at which we aim. If you have joined us here do not despair — with luck and cunning you may yet turn out to be the ONE. Perhaps our advice should be to wait and **see**!

1: **THE DARK WORLD**
You, ... (your name is anagram of some of all the letters in Computer Gamer) . . . are alone in the Dark World. The planet Earth is eons away and long ago, and all around is black. To light the path that you must travel you will need something to guide you. We, the Guardians are pulsing a message to you but cosmic status interferes with the transference. If you are able to sort it out then your score will help you on your way.

1 FBLBAAMCIONMG (score 25 points)
2 LLIWGNORTSDNA EDUTITROF (score 25 points)

2: **A KEY**
It is time to move on, so, brandishing the torch and bracing yourself you step forward into the gloom, the darkness forming a shroud about you. Strange thoughts and images come into your mind. The air is filled with illusions. You can feel our presence as if we left a trace. It is old and crumbling — long before your time. But you, with the accumulated knowledge of past and future generations (for which of us knows the time in which we are?) are able to deduce a fragment of our identity. There are two ways to find c — the first key 'a' may strike the right note with some, while 'b' might lead to 'c' for some of you others.

3: **SECRET OF THE EAST**
Conceal this letter well. Ancient lore knew of it but to prevent it getting into the grasp of the dark forces hid it in a letter maze until one who knows it should chance along. It should provide a number if you put it in the shade and thus forever banish it from prying eyes from the other side.

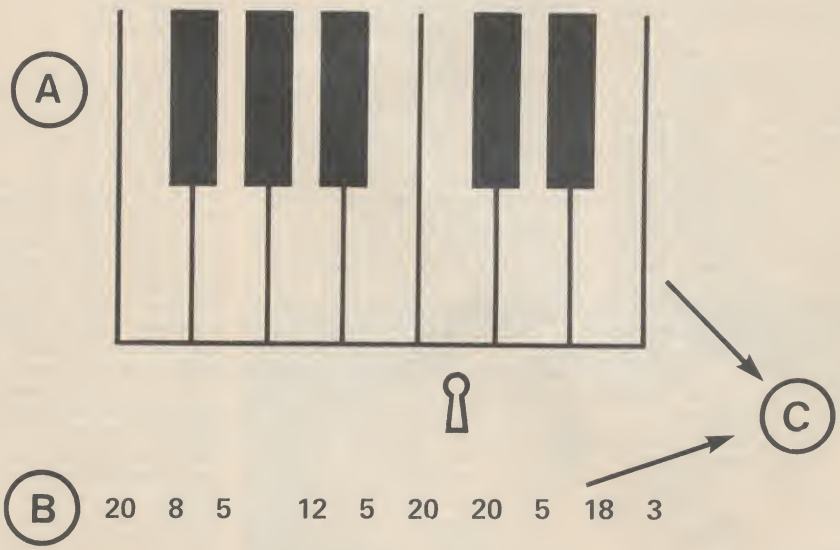
B B B A A A D A D
D C C C A C C C D
D C B C B B D C D
A C C C B B A C A
A C A C B B A C B
A C C C B A A C B
A B D D D B A A A

score 50 points

4: **LORDS OF THE VOID**
The Lords of the Void are angry. You have shot a bolt of fiery lightning through their evil intent by solving the above riddle which they were on the verge of discovering. The Tribunal has been summoned and you, because you have so little strength, so early on in this journey, are compelled to attend. The Gamemaster of the Void has provided a little diversion for his peers. You are to them as a mouse it to an elephant — a plaything to toy with; something that at worst is a mere irritant. Now they intend to drain your brain of strength and perseverance. If, for one moment they thought you could deliver an answer, then they would not let you play at all. For an answer opens the door of time through which you could slip through.

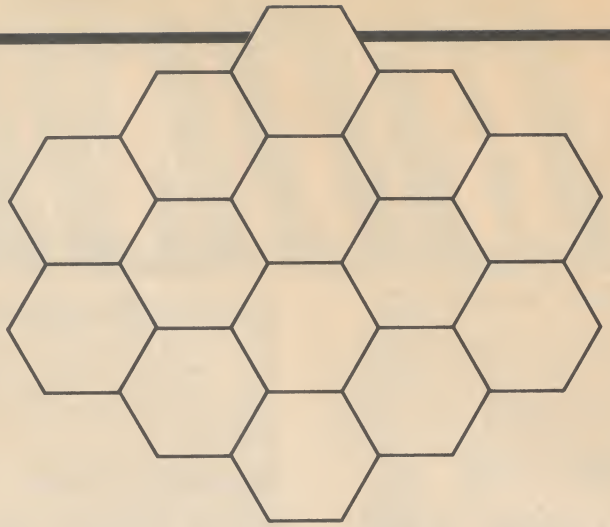
We wish you well. Challenge the Gamesmaster and beat him!

Like the combination of a safe, the fourteen hexagons will fit into the shape below (you might cut out the hexagons and mount them on card, or make copies). The problem is to ensure that adjoining sides a have matching equal numbers eg.



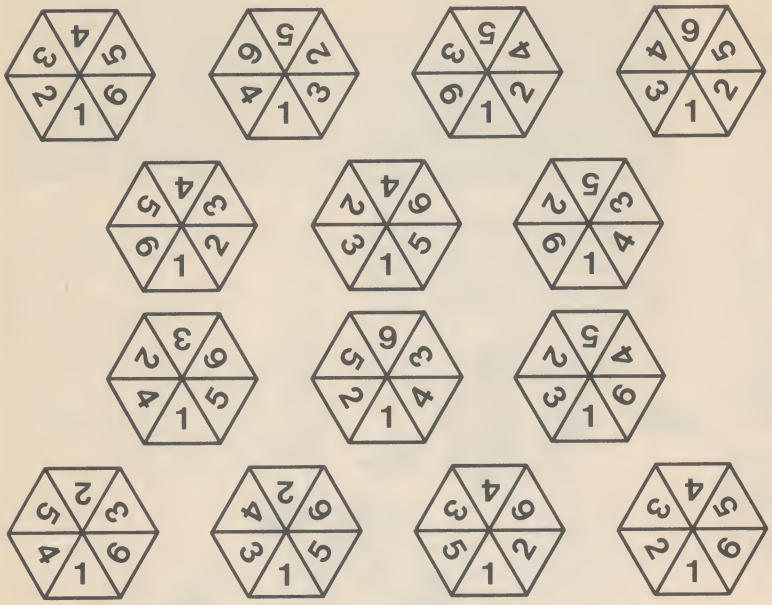
score 50 points

23



If you have matched the numbers correctly then you can slip from the grasp of the Lords of the Void into another time. As you go on take what you have already discovered — and score 100 points.

Remember, keep a check of the total score. It may not necessarily be the one with the highest score that is able to discover ALL. Until another TIME and another SPACE...WE, THE GUARDIANS wish you well.

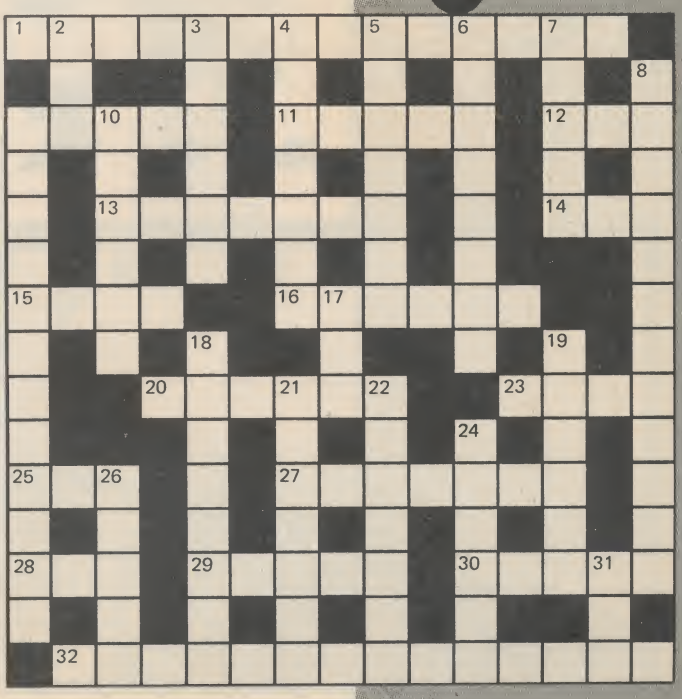


CLUES ACROSS

1: Fourtold? (4,2,3,5)
9: Lord of 26, in 1.
11: The French, the Italian, the French . . . the town.
12: Went West to save lives.
13: Didn't succeed at first — taken back to court.
14: Cubed, or broken at parties.
15: 'Edro' in translation,. in 1.
16: This is no yarn — it's based on 9 (like 1).
20: X-stacies?
23: Trumpet — plays the Little Boy Blues.
25: John Selwyn begins to stick.
27: Squirm, and give the slip.
28: And it isn't short direction.
29: End of the line — organ transplant required.
30: A Villain in 1, returning to 6.
32: Leader of 9 in 1, lost in 26. (7,3,4)

CLUES DOWN

2: Eggs in renovation project.
3: Made up, near to gaudy.
4: Not like him to write 1.
5: (Fitzgerald and Dare) returned from the west with news in 1.
6: Once a beautiful place, in 1.
7: One of 9, in 1. (5,7)
8: Pippin, in 1. (8,4)
9: He was 111, in 1.
10: 9 were loth to leave here, in 1.
17: On course, for 1.
18: In 1, across a river from 10.
19: 2 of 9 climbed here with 21.
21: Ate fish, in 1.
22: Villainous captain, in 1.
24: A little time?
26: Where 9 ac. was lord, and buried, in 1.
31: Employ Sue, in a roundabout way.



24 HINTS

Hints and help is the life blood of all gamers. There are very few people who can complete any game without a little bit of help. Indeed with some extra complex games, it ends up being more of group effort than any one person's strivings.

So in this, the first of a regular series, I will look into three games, and aid you in being able to increase your score. Remember, if you know of some small (or large) hint that will help another gamer play a game, then send it in to our usual address along with your name, address, telephone number, age and membership number for the club. If you have no number, then send your application along with your hint.

As always send it marked 'Hints' to:

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Pole Position

The first game we are going to look at is Pole Position for the Atari home computer system. The techniques are also applicable for the BBC, Spectrum, and C64 versions.

Braking? Don't!

There is only one time where you should use the brakes, and that's on the corner that all regular players know and hate. It is a very sharp left hand hair pin with a brown sign on the right hand side (colours may vary according to version). You may get into a bit of bother with this if you are trying an outside overtake of an opposing car (you shouldn't be in this position — read on later). The point to remember here, is that your speed must be below about 154mph to be able to turn at a rate that will get you around the outer lane of the track without smashing into the sign.

Doing 195mph on the right lane surrounded by hostile cars is the only time that I allow myself the luxury of brakes, swerving, and low gears! — in fact anything to bring you down to the magic 140mph you need to escape from this dilemma. Anything higher and you skid into that sign.

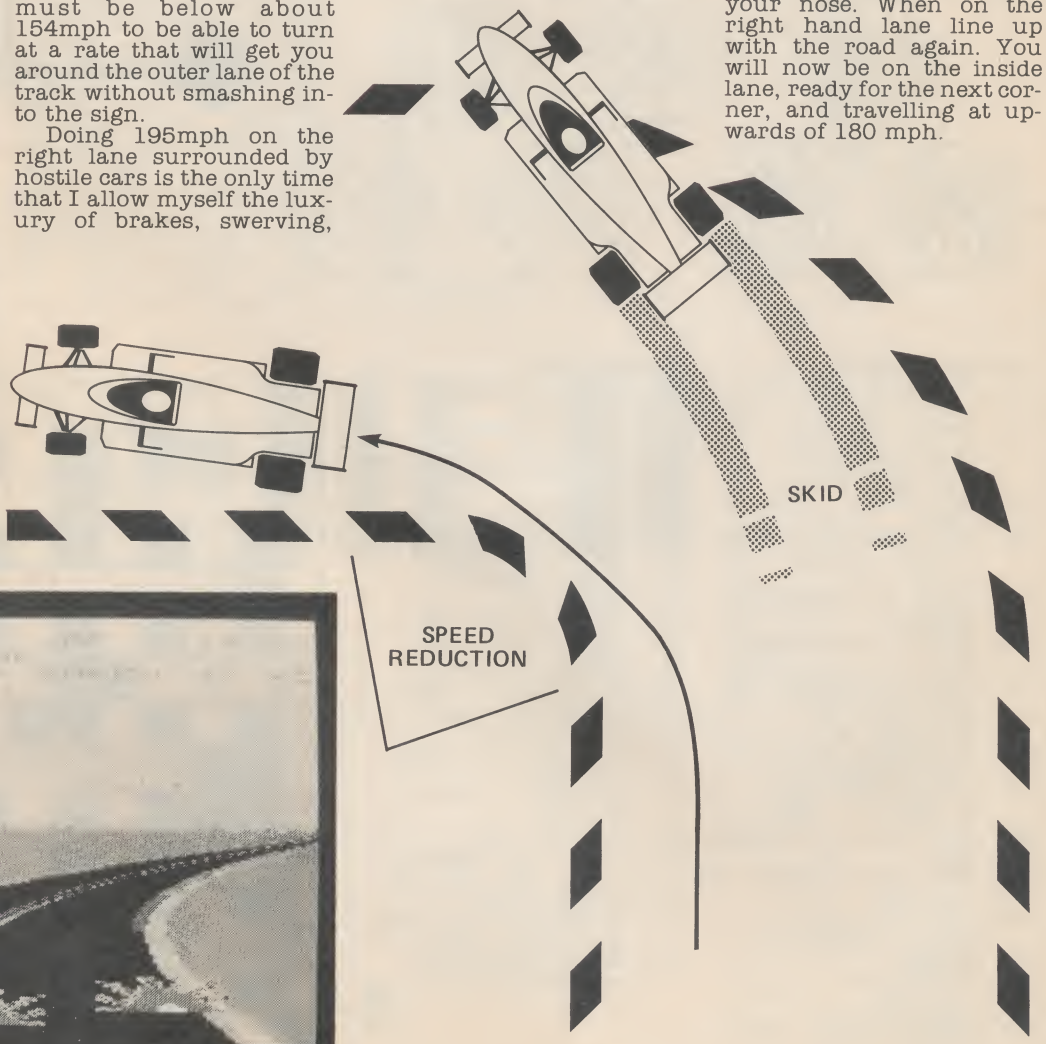
Slowing Down

As the previous section mentioned, slowing down should not be achieved by using the brakes. This is due to them slowing you down too much. Resulting in lost time to re-accelerate. To slow down those few mph you need, occasionally you should skid. Skidding slows you down by a small amount, usually all you need is a subtle change in velocity.

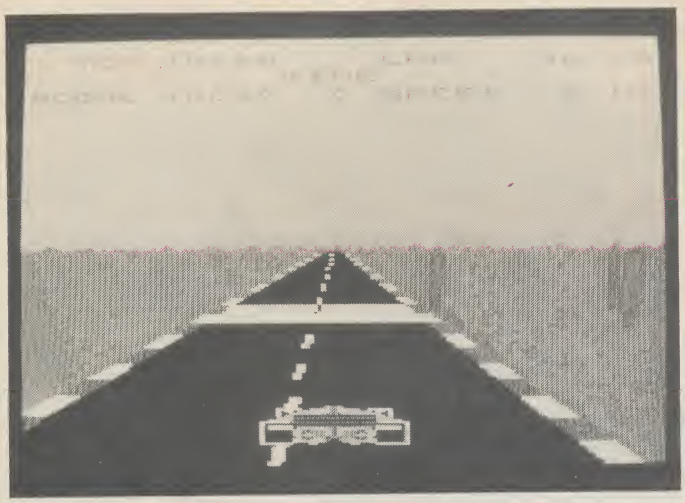
Skidding around corners can be useful, especially if there is a block of opposing cars. Overtaking on a corner is not much fun, though it is fairly straightforward for the experienced player, it merely needs experience in co-ordinating all the controls at once.

Ramming the road is useful for rapid drops in speed and equally rapid acceleration afterward. This technique should be used on the infamous hairpin bend under perfect conditions.

On the straight towards the bend you should be on the left lane doing 195 mph, or near to it. As you see and approach the corner a sign will appear on your left. Duck in as sharply as you dare after the sign as hard as you can for a couple of seconds until your speed hits around 155-160 mph. Then duck out to the right as hard as is practical. The infamous and deadly sign should pass harmlessly in front of your nose. When on the right hand lane line up with the road again. You will now be on the inside lane, ready for the next corner, and travelling at upwards of 180 mph.



Pole position is a game that is popular both in the home and in the arcades. Mike Roberts keeps you on the right track with his hints and tips.



This method must, of course, be modified if there are any opposing cars in the way.

Corners

Corners should always be taken on the inside lane. This gives you more manoeuvering room and means that you can take it at a higher speed, you excess speed can be shed by sliding to the outside lane if necessary.

Avoiding objects is also easy. If there is one in your lane, sliding out will avoid it. If there is one in the lane that you are moving to then turning back into your original lane will reduce your speed sufficiently to bring your next clash with the cars on the following straight — where they are much easier to handle.

If the road is clear and you want to grab every tiny bit of speed you should try tapping around corners. Again the technique requires you to be on the inside lane. The road also needs to be clear of cars, as this method sacrifices all manoeuvering ability.

As you hit the corner at 195 mph you will start to move onto the outside lane. The technique requires you to 'tap' the joystick towards the inside of the corner. This will just move the nose of your car and correct the outward slice of the car, but without skidding or the shedding of any velocity. You can, in fact, accelerate around corners like this. However, some corners are too sharp to use this method their whole length. And the speed defecit created by a quick skid to the inside lane can soon be made up to maximum in the remainder of the corner.

The last long bend is the best for this method and you can 'tap' around the whole length of it, gaining precious time as you come up to the line.

Overtaking

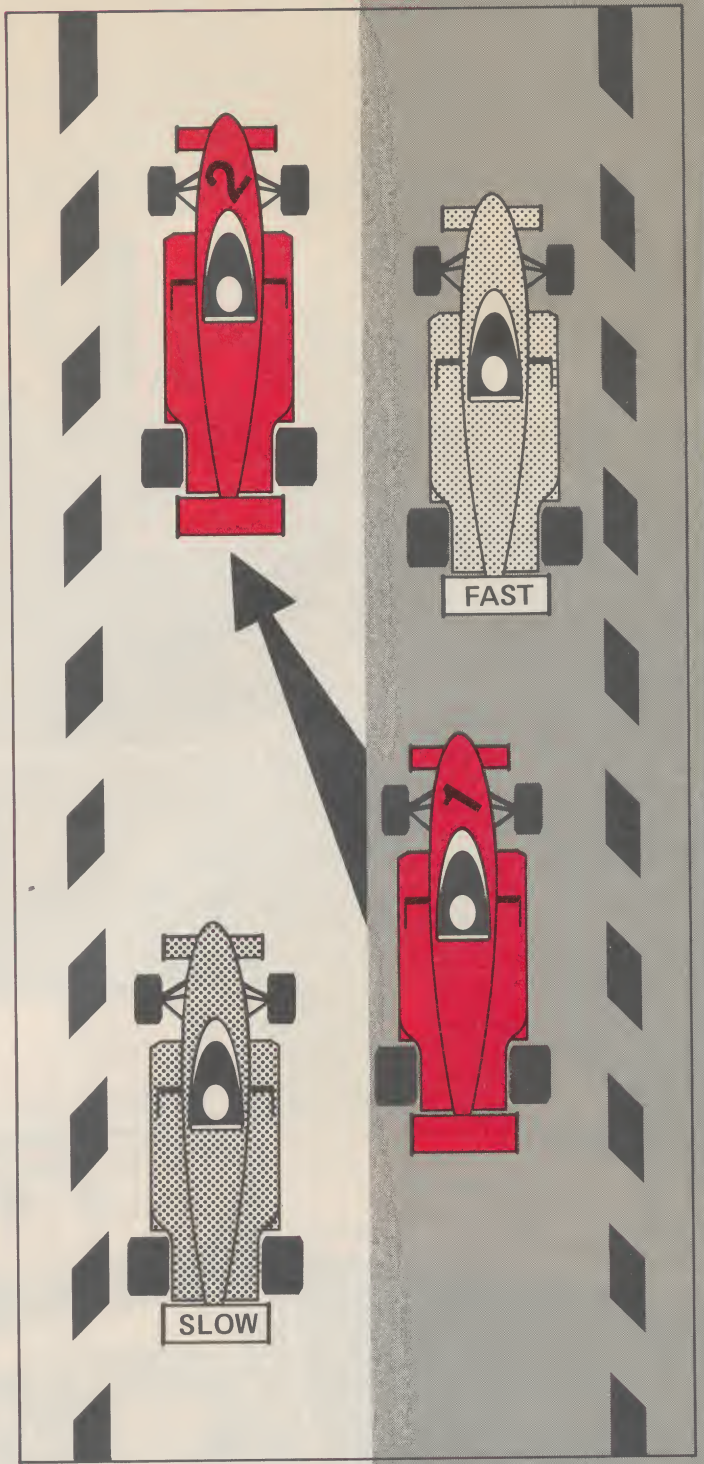
Cars rarely travel in singles, they usually move around in pairs or fours. On average, every two laps a block of eight cars will appear.

Overtaking a single car is dead easy — you just sort of swing around it. However, you have to be careful that you don't smack into its pair which just happens to be unseen around a corner.

Tackling groups of two or four is a bit more difficult. A group of four can, logically, be considered as two pairs tackled in quick succession. So just apply the pairs technique, and think quickly.

The thing to know about the pairs is that the two cars travel at different speeds. Once you have worked out which is the faster car, you should tuck yourself behind it (remembering to regulate your speed as not to smash into his rear). Then when the slower car drops behind, you can nip smartly between the gap.

With sets of eight, the cars are staggered, so you must keep your speed to within a 5 mph margin and zig-zag between them. Doing this on corners is very difficult.



The End Result

My personal best is 108950. That has stood for three months on the high-score page. Use these techniques and you should be able to come close to it. Mike Roberts.

The Band's On The Run!

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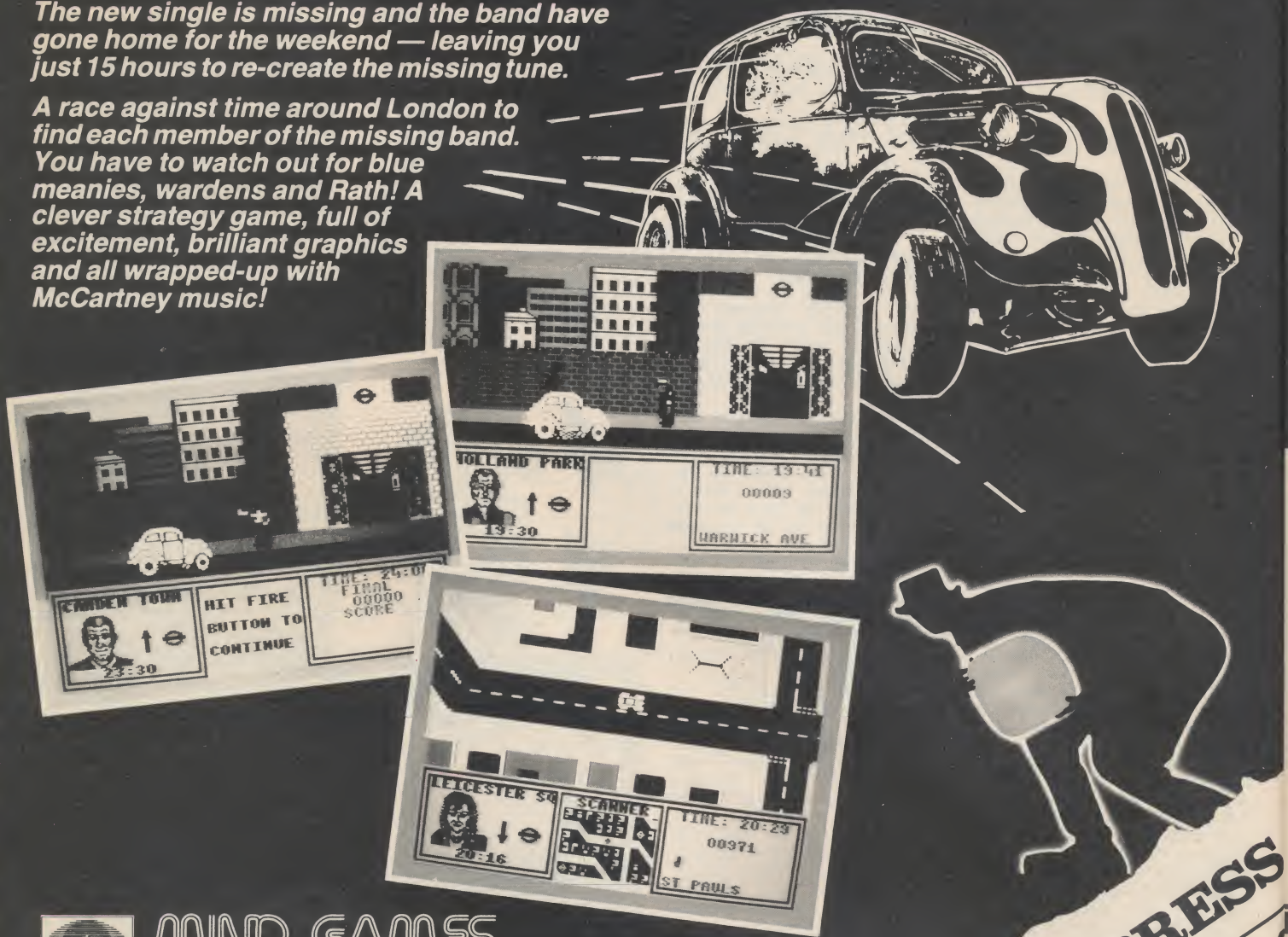

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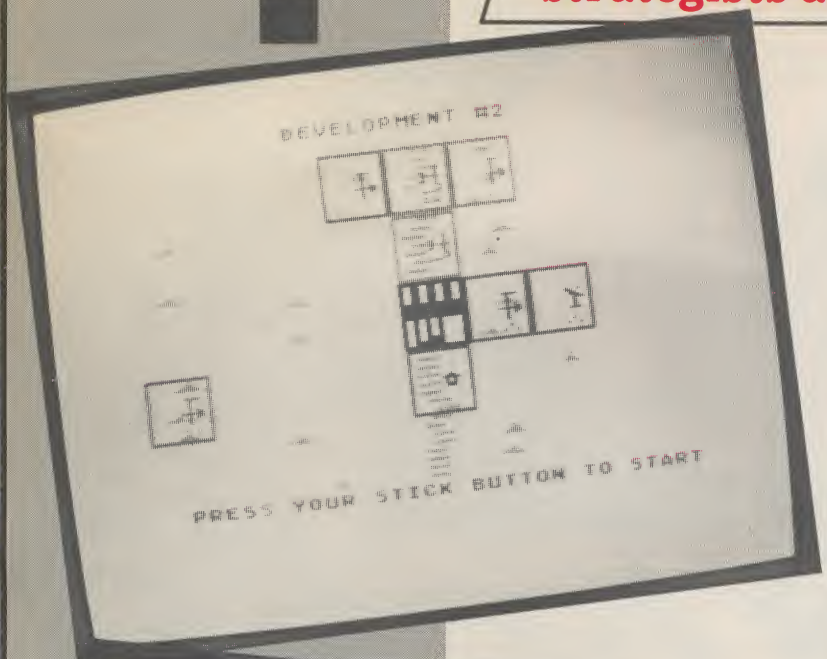
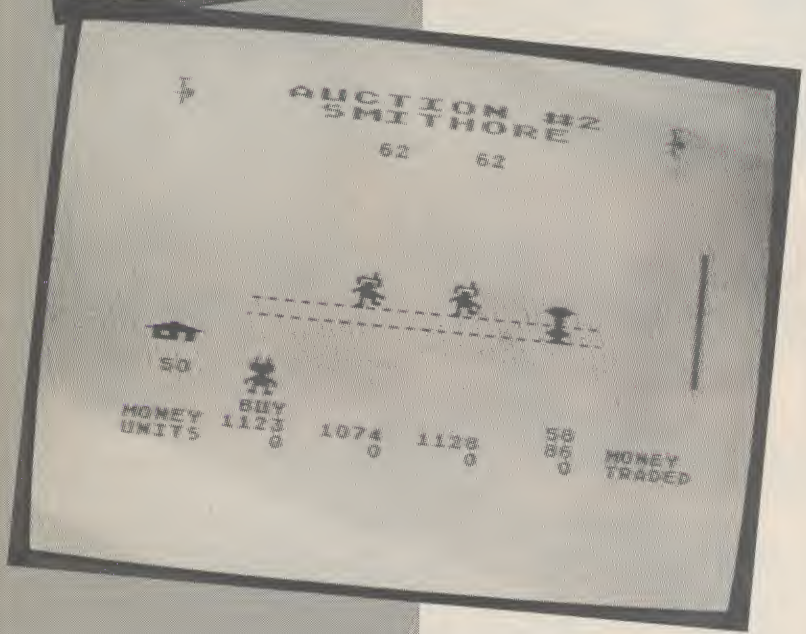
M·U·L·E

Dave Bishop takes an indepth look at a strategy game that attracts both strategists and arcade freaks.





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Imagine an economic strategy game where success owes as much to hand-eye co-ordination and quick thinking as it does to strategic planning!

Imagine a game as complex to master as chess and yet as simple to learn as draughts!

Imagine a game that lets four people compete and yet forces them to co-operate.

Imagine a game that attracts both strategy players and arcade freaks.

You have just imagined M.U.L.E.

M.U.L.E. is a game of exploration and development on another planet for up to four humans. The computer will take over up to three players if you are short on Homo Sapiens. There is also a complete demonstration game where you can sit back and watch the computer play all four players.

The Aim of the Game

By deploying resources and developing plots of land each player must try to make as much money as possible. But there is a catch because you each form part of a colony which must, as a whole, achieve a certain monetary level in order to survive. The more selfish each player is in his or her pursuit of wealth the more the colony is placed in jeopardy!

Choosing your Character

There are eight different characters to choose from, each with different abilities. For instance Bonzoids are good at mining Smithore (more of that later). Different characters also start with different amounts of money.

What is a M.U.L.E.?

M.U.L.E. stands for Multiple Use Labour Element and they are robots designed for exploring alien worlds. The design of the M.U.L.E. allows pioneers to outfit them for specific tasks. In this game M.U.L.E.s are used as mini-production facilities.

Resources

there are four resources:
(1) Food
(2) Energy
(3) Smithore
(4) Crystite (only found in the tournament game)

Food is needed to provide enough time to outfit more M.U.L.E.s. All plots except those producing food will use up this resource. Food plots themselves are self-sufficient. The price of food usually stays well below 50 except during shortages when it can rocket well into the 200's. The best place to produce food is by the river!

Energy is required to power your M.U.L.E.s and a lack of energy will result in under production on one or more of your plots. As with food plots those with energy M.U.L.E.s are self sufficient. The price of energy follows much the same pattern as that of food.

Smithore is one of the two raw materials that can be mined by the colony in all areas except the river, however, those plots containing mountains will yeild the most plentiful supply. The more mountains in a plot the better a Smithore producer it will be. Smithore is used to produce more M.U.L.E.s so if nobody produces Smithore, no new M.U.L.E.s will be made and if there is a run on M.U.L.E.s then the

Smithore price may soar well into the 200's.

Crystite, like Smithore, is mined from the ground but there are only a limited number of plots where decent supplies of crystite can be found. There are two ways of determining whether a plot is rich in crystite. The first is by assaying the plot you are interested in, by taking a soil sample back to the town for analysis. The second way is to deploy a crystite M.U.L.E. onto a plot you think may be rich in crystite. Once production for that round starts the number of dots in the bottom left hand corner of the plot will tell you all you need to know. The price of crystite ranges between 50 and 150 and is not affected by supply and demand.

There is a store in the town whose prices (except for Crystite) are governed by supply and demand. The store's selling price will always be 35 higher than it's buying price, that is if it has anything to sell!

Let's play a game!

The game is divided into three main phases:
(1) Land grant
(2) Development
(3) Auction

The Land Grant

The colony is divided into 44 plots, one of which is the town. The remaining 43 can be used to produce any one of the four resources mentioned above by the outfitting and development of a M.U.L.E. At the start of the round a black cursor frames each plot in turn from top to bottom and from left to right. Land is chosen by pressing a joystick or keyboard when the cursor frames the plot you want. It isn't always that simple though because someone else may want the same plot as you in which case the first on the button will get it, although close calls will invariably be won by the player with less money at the time.

At the end of the land grant phase extra plots may be put up for auction (more later).

Development

Plots are developed by entering the town and purchasing a M.U.L.E. which then has to be outfitted to perform it's required function. This having been done you must lead the M.U.L.E. to the plot you want to develop.

At the end of the phase the production of those plots with mules is shown by the number of blobs appearing in the plot from 0 to 10.

Auction

After production comes a series of auctions where players can bid and outbid each other for the various resources. This is one of the best designed features of the game!

At the start of each auction you must decide to be buyers or sellers. This having been done the players are displayed on the auction screen with the sellers at the top and the buyers at the bottom;.

By using joystick or keyboard players can move up and down the auction area and where buyer and seller meet a transaction will take place.

When two buyers meet a seller at the same time (or vice versa) the player with the least money will transact first. This allows you to buy out the store, for example, when one or more of your opponents need to buy too thus leaving them short!

Economics

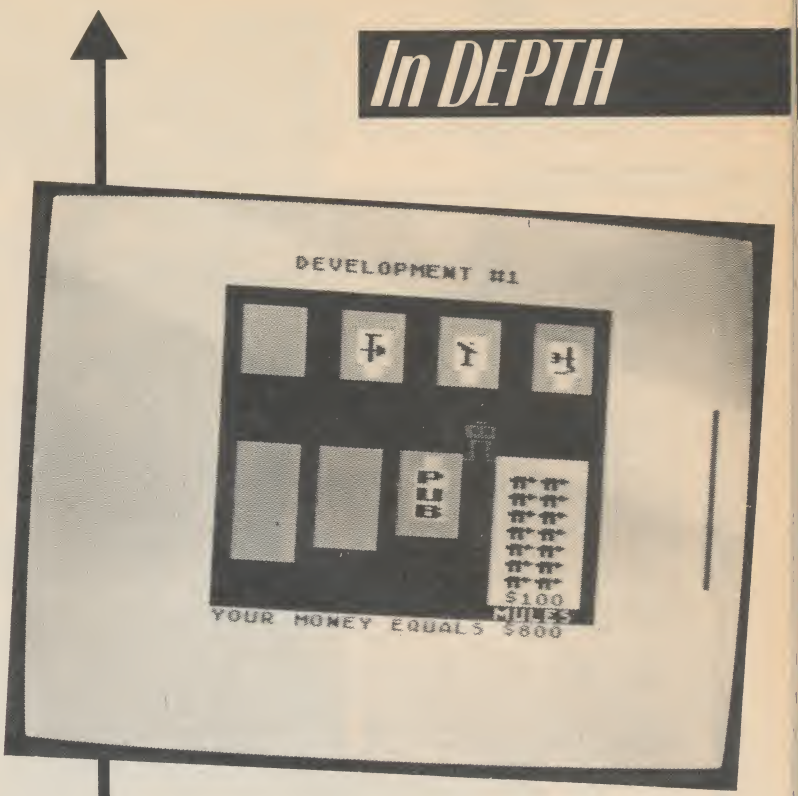
Buying and selling prices in the store are determined by the amount of production and the colonies requirements of each resource. Accurate monitoring of price fluctuations is a prerequisite to successful M.U.L.E.ing as it allows quick killings to be made by offloading before the price drops.

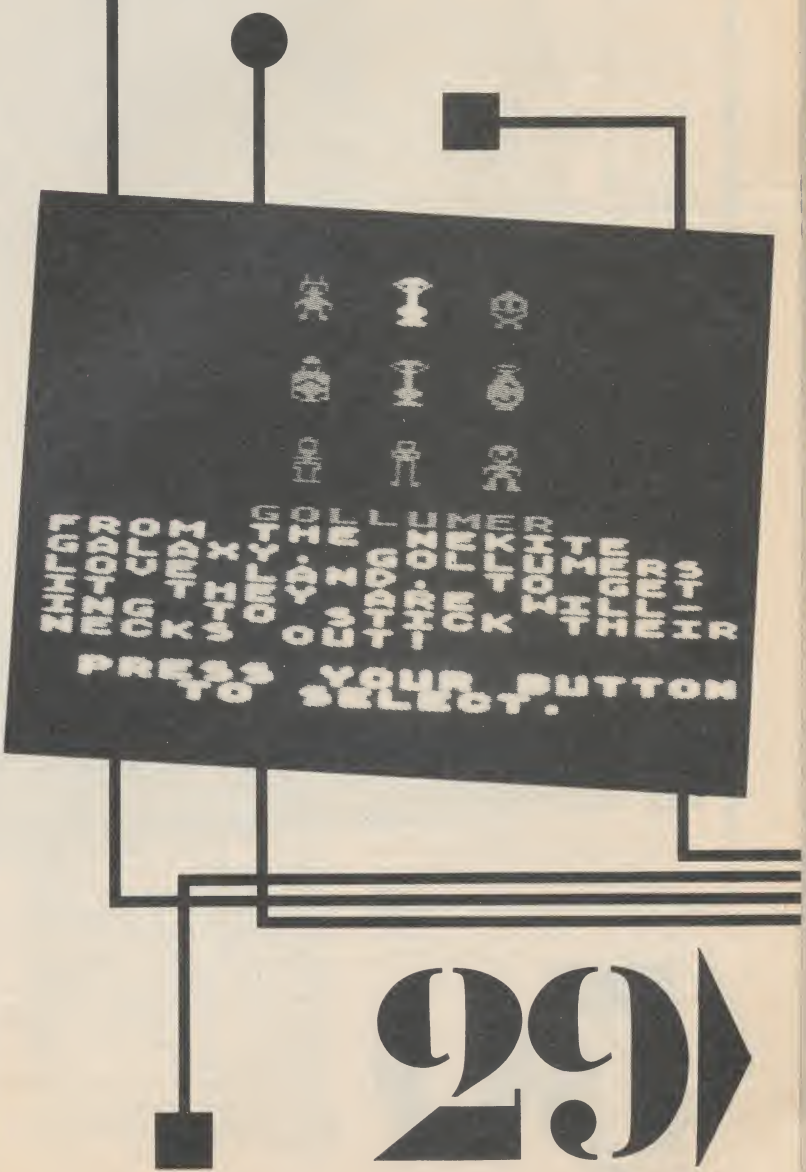
Another vital area of the game comes when deciding what type of M.U.L.E. to deploy on a given plot. There are a number of reasons for deploying a particular M.U.L.E. One is to produce food or energy for your own continued survival, another may be because everyone else is either short of or not producing, say, energy and you think these factors may push the price up and even dictate the selling price, especially if the store doesn't have any.

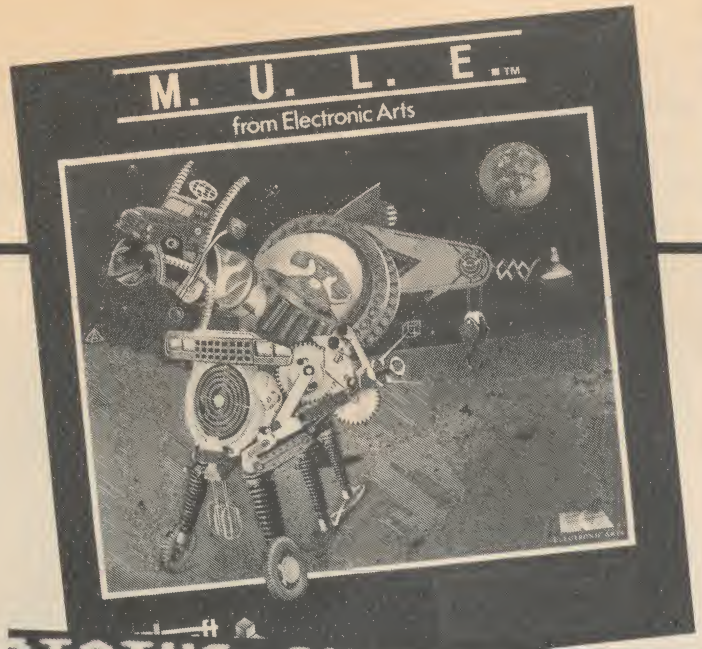
Here, as in many other places, the player in last place is helped by going last in line during the deployment phase. This allows him to see what the others have done and legislate accordingly.

Economics of scale & the learning curve

Before each land grant phase it is important to work out which plot you're going to try for. Adjacent plots producing the same thing will produce one more unit each due to economics of scale. When







three or more plots of a similar persuasion are owned by the same player then each will produce another extra unit each as you learn to produce more efficiently. A good policy therefore is to develop groups of plots that are all connected. This allows far more flexibility in M.U.L.E. allocation and means that like pairs of M.U.L.E.s can be deployed at any one time.

Scoring

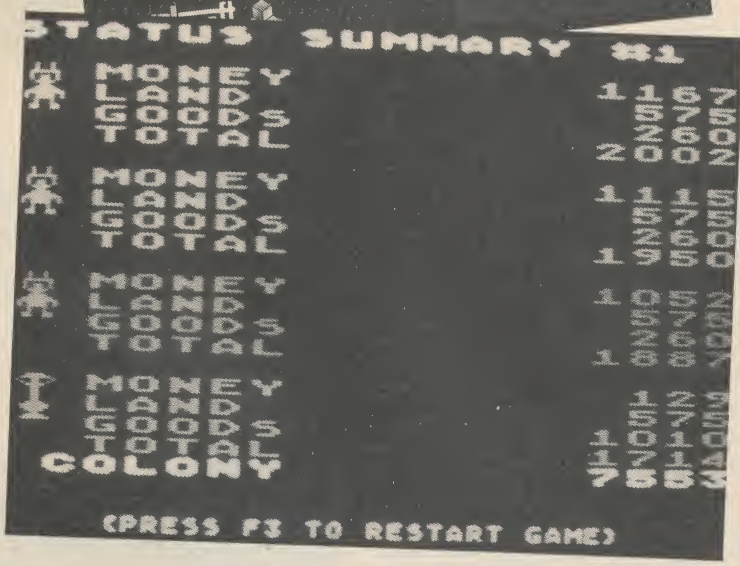
The net worth of each player is given by the total of cash, land and goods. Land is given a nominal value of 500 plus the value of a M.U.L.E. should it contain one. Goods are the resources that you own at the time.

A league table showing each players net worth is displayed at the end of each round of which there are 6 in the beginners game and 12 in the standard and tournament levels.

Random Events

During the production phase there is a high probability that a random event may occur, sometimes inconsequential, sometimes devastating. For example: consider the situation where there is a glut of food in the store and nobody is actually producing much themselves — why should they? it's in plentiful supply, the price is rock bottom and Crystite or Smithore plots should pay far better dividends. All this is sound reasoning until there is a fire in the store destroying all it's stock. Suddenly food, and perhaps energy, becomes a rare and possibly very expensive commodity into which players will have to move if they are to continue outfitting M.U.L.E.s.

Other random events include the planetquake which halves mining production (of both Crystite and Smithore), sunspot activity which increases energy output and the most feared of all — The Pirate — who steals all Crystite produced that round including any that players may have been hoarding because the price wasn't high enough to justify selling last round.



Collusion

One of the extra features of the tournament game is the ability to shut out one or more of your opponets during the auction phase. This means that two players could come to a private arrangement where one concentrates on food production while the other makes energy. This means that both players can benefit from economies of scale and the learning curve thus producing more of their chosen resource. Then during the auction phase energy and food can be exchanged to enable both players to have all they need of both!

Collusion is also used to stop a particular player from buying something he wants.

Collusion during land auctions

As mentioned above you may not be the only one trying to get a particular plot during the land grant phase (especially if a Crystite meteor has just landed on an unowned plot!).

This often results in players with plots far away from their main developments. In such cases it may be better to sell the plot in question to another player especially if he has one smack in the middle of your development. Collusion allows you to sell land to your chosen player without interference from the others.

Summary

It is very difficult to convey in so few words how deep a game M.U.L.E. really is. All I can say, is play it for at least an hour — if after that you can't see why M.U.L.E. is one of the best games ever written for a computer then I'll eat my memory map!

Hints and Tips

The following may help you discover some of the many subtleties which abound in M.U.L.E.:

(1) Try to become self sufficient as quickly as possible don't rely on the store for a continuous supply of food and/or energy — someone else may buy the store out or there may be a fire.

(2) Buy as much land as you can as early as possible. It is difficult to win without more than you fair share of property (11 plots).

(3) Because of the many ways M.U.L.E. favours the losing player it is no great advantage to hit the front too early — in fact the best time to take the lead is round 11.

(4) Never keep a surplus of more than 1 unit of food if you can help it because food wastes at a rate of 50%. However you may have occasion to ignore this rule of thumb if, for example, you wanted to buy up the stores supply to deliberately starve one or more of the other players.

(5) Always keep between 2 & 3 surplus energy units to allow for development next round — remember your present break-even level does not take into account extra energy requirements for the next round.

(6) The pirate usually comes at least once in the game and often twice. So if you've got lots of Crystite because the price has been lousy lately but it's late in the game and the pirate hasn't made an appearance yet then think carefully about selling at a modest price in preference to losing everything next round.

(7) Always try and group plots together for more efficiency.

(8) Early on in the game assay to determine the whereabouts of the high Crystite plots. Remember an assay resulting in a "no Crystite" message can be very informative in pinpointing where Crystite CAN be found.

M.U.L.E. is available in Atari and Commodore versions from Ariolasoft.

64 ADVENTURES

Infocom are the undisputed leaders in text adventures. Gordon Hamlett examines their range in his first look at adventures for the Commodore 64.

Life is becoming very interesting for 64 owners. Not only do they have an ever increasing base of British software available to them, but also, large amounts of American software are now appearing on the scene. Whereas previously, games from the states could only be obtained from a few specialist stores who had imported them, top titles are now becoming freely available under such labels as US Gold, CBS, Ariolasoft and Commodore themselves. For adventure fans, this is great news. The bad news though is that you will almost certainly have to buy a disk drive to enjoy a lot of these transatlantic treats.

You cannot get very far when talking about American adventures before mentioning Infocom (I'm surprised it took him 'til the second paragraph — Ed). They have justifiably acquired themselves a reputation of being producers of the world's best adventure games. If that sounds as though I am secretly in their pay, then let me try and explain.

To start with, the games are text only. Not for them, a few lines of description, but pages of it. It is very well written, funny and most important of all, totally convincing. This applies to the whole of the storyline which fits together beautifully and reads as if it has been written by a professional author rather than a computer programmer. The text also contains essential clues and so must be read very carefully. I would recommend reading a description at least twice. Once fairly quickly to get the general feel of things, and then a second time slowly to glean all the extra bits of information.

So what are these wonderful games? The most famous ones and the ones that started the company going are the Zork trilogy. Set in the Great Universal Empire (a land which I now totally believe in!), the games are independant of each other and can be played in any order although it would seem logical to start at the beginning. This gives you an extra advantage later on as you may gain an additional clue or two. For example, there is an oblique reference in Zork I as to what happens if you go round saying "Hello sailor" but it is not until Zork III that you come across a gentleman of the sea.

Whilst the task of collecting twenty treasures in Zork I is not exactly original, the problems

64 ADVENTURES

associated with getting them are. Amongst other things, you have to learn how to operate a dam and perform an exorcism. Other games feature a theif who robs you of your treasures but only in Zork do you have to use his special skills to help you. In Zork II, you get to meet the Wizard of Frobozz, a somewhat dotty old man who will attempt to cast assorted spells over you and so hinder you on your way whilst in Zork III, you have to find and overcome the Dungeon Master himself.

One of the lovely things about the games is the way in which they have anticipated most of the "wrong" answers. Instead of just saying "You can't do that", they make fun of you when you try something stupid. If something is logically possible, then you can do it. (So many games do not cater for things like your burning desire to stand on a table). It may not get you anywhere, but in Zork you can do it. The parser (the bit of the program that understands your input) is very detailed and sentences such as "Drop everything except the hot pepper sandwich" are fully understood. There is always a lot of material to read within the game such as leaflets, books of matches, bibles etc and again, everything should be read carefully. Half of them will be adverts for other Infocom products but the other half will contain vital clues.

If you like more magic in your fantasy games, then take a look at Enchanter and Sorceror. To help you in your attempt to rid the land of evil, you have a spell book at your disposal. Further spells can be found along the way, usually written on a scroll. It is normal then to try and write the spell into your book from where you can use it again and again but some spells are so powerful that they can only be used once by reading them off the scroll. Working out which spells to use where is great fun and you soon get used to the strange names of the spells such as gnusto, izyuk and frotz. These games could almost be called Zork IV and V and the use of magic adds an extra dimension.

Perhaps you prefer science fiction or fantasy. If so, there are four titles to keep you amused. Starcross puts you in charge of a space ship in the year 2186 on a search for black holes. Everything is going all right until you come across a giant space ship full of strange aliens... In Planetfall, you are playing the part of a menial galactic crewhand when your ship explodes and you manage to escape to a strange world. Out of the frying pan and into the fire as the planet also needs saving. Fortunately, you soon come across a small mischievous robot called Floyd to help you on your way. Robots also play a large part in Suspended. Something has gone drastically wrong on your ship and you get awakened from your cryogenic capsule in order to put things to right. You do this by controlling six robots, each of which has a different function. Iris and Auda act as your eyes and ears respectively. Waldo will manipulate things for you, Sensa will analyse various emissions whilst Whiz acts as an interface between you and the data bank. My favourite though it Poet who, when he is not actually touching something tries to make the best of his surroundings. The result is some wonderful hippy type outpourings. Getting six different views of the same area makes fascinating reading and the game has one of the most original storylines I have seen. The fourth sci-fi game is the newly-released Hitchhikers Guide to the Galaxy. As a review follows this article, I won't say much about it. Suffice to say, it is well up to Infocom's usual standard and is very funny indeed.

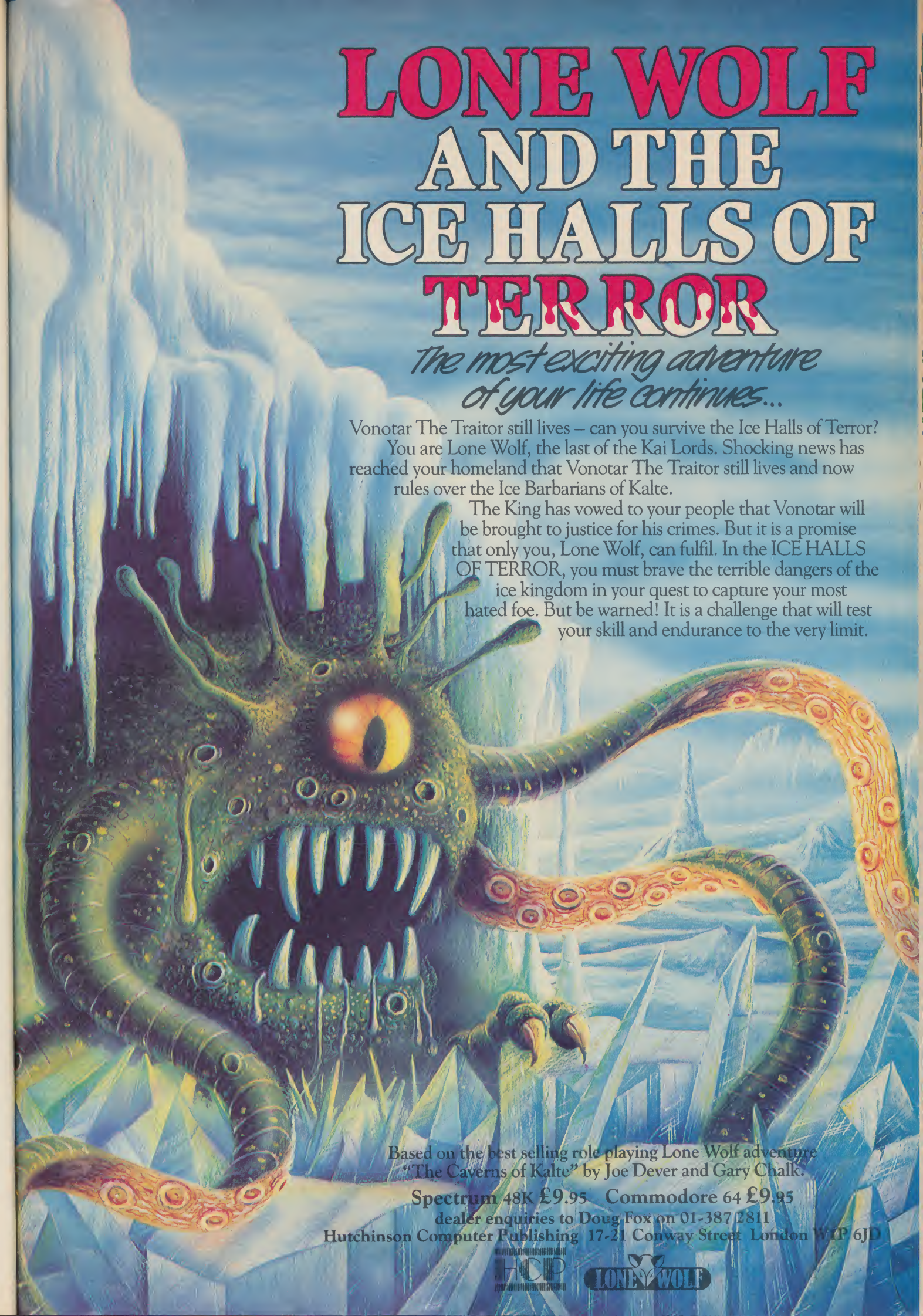
If you are one of those people who always claim to solve who-dunnits before the last page, you have the chance to prove it with Deadline and Witness. Here you have twelve hours to question suspects and analyse clues before arresting someone. Different actions take varying times to complete. For example, if you examine something carefully, it will take longer than a cursory examination. You can ask people about other people or objects. You can accuse them, trying to get clues from their reactions and finally you can arrest someone. You will then be assessed on your performance. Just to make life more difficult for you, the suspects are living their normal lives, moving around — and trying to cover up the evidence.

Just in case you have still not found a scenario that suits you, you could explore a lost pyramid in Infidel, tangle with pirates in Cutthroat or explore under the ocean with Seastalker.

All Infocom's games are beautifully packaged. You don't just get a disk with a few introductory notes. For example, in Witness, you get a copy of National Detective Gazette, a suicide note, a telegram, a copy of a local newspaper and a book of matches complete with scribbled message. The package is completed with booklets advertising other Infocom products and the whole package is contained in a wallet somewhat larger than this magazine.

Before you rush out and buy all the games, there are however, two drawbcks. First, the games are not cheap (£30-£40) especially with the strength of the dollar against the pound and secondly, as mentioned earlier, you will need a disk drive. To alleviate the price problem, Commodore have produced six titles under licence. These games are Zork I, II and III, Starcross, Suspended and Deadline. At a price of £11.99 these must represent value for money. As for the disk drive, more and more software, especially American software, is being produced on disk only and it is a medium that will become increasingly important in the games market. There is a story doing the rounds about people who have bought a BBC just so that they can play Elite on it. Infocom games are so good, that I would suggest it is worth buying a disk drive just so that you can play them.

Infocom adventures are also available for the Atari, Apple and IBM pc.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LONE WOLF

ADVENTURE HELPLINE

Marion Champion helps you with your adventuring problems.

Feeling Adventurous

Are you one of those many keen adventurers who started out so well in your travels around the locations of THE adventure, but find that now you have come to a barrier which you cannot pass? If this is the case then read on.

Many adventurers find that once they leave the initial beginners stage of adventuring and begin to find their feet in the world of adventure software, their seemingly rapid increase in skill and knowledge of these games suddenly seems to slow to a halt. Once over the first hurdle of basic adventure tactics, the player finds his skill does not seem to be increasing and he continually gets stuck at a certain stage of every game he plays. Obviously the puzzles and problems increase in complexity the farther you get into the game, the practise and perseverance is not always enough to get you through.

I believe that a tremendous amount of experience can be gained from writing your own adventures. It enables you to understand the complexities of an adventure program and at the same time perhaps be able to get behind the minds of the software writers and follow the deviousness of their plans. You will learn the problems they encounter and find out how they must simplify or change these ideas in order to overcome these problems. And of course apart from all that, it's a lot of fun.

I'm not going to give you all the programming techniques that are used, that would take too long. I am just going to outline what the basic requirements are.

If you decide to proceed with adventure writing then I would suggest that you perhaps invest in a book on the subject, one compatible with your computer obviously. There are several good books about a variety of micros so I shouldn't think it would be too difficult to find one to suit you.

Once you have decided to write your adventure, you need a plot. It is rather nice, instead of just having a single aim to your game, such as finding the treasure and getting it back to your treasure chest, (a typical adventure goal), to write yourself a little scenario to go with your game. Here you can really let your imagination run riot. You can think up a short story around which your adventure will be woven. I always find it interesting, if when playing the adventure, you play it as one of the leading characters in the story. It would seem rather pointless to cast yourself with a walk on role in your own adventure.

Your story can of course be anything that takes your fancy. You can stick to the more traditional line of deep forests, black towers castles and caverns, or you can perhaps go for something a little more modern, like a space adventure, or even something involving everyday objects which seem you have developed a mind of their own, or even a combination of all these ideas just to confuse players, (my favourite sort).

Once you have wriiten your scenario you can begin work on the adventure. The limitations of your game are entirely up to you of course, ie. how many locations, puzzles that will have to be solved, vocabulary listings and all the usual paraphernalia associated.

It is best to start with something simple, ie. a fairly short text adventure involving a small selection of locations, puzzles, objects and characters. You could actually write a short adventure using very basic input commands with a number of subroutines on what I call a conditional basis. This means that something will only happen of a certain condition is fulfilled. This type of program on it's own does not allow much scope for

detailed and imaginative adventuring, which is why I suggested the purchase of a book to start you off.

It is necessary for you have a plan of how your locations are to be arranged and what perils you wish to place within each of these locations. I do suggest that if you have a fairly limited knowledge of programming that you are not too ambitious to start with. It is better to build up your program gradually in sections of short subroutines then putting it all together afterwards, rather than trying to write the whole program at once and then finding out that it doesn't work.

Graphics of course are a luxury to my mind, but once you have mastered the written technicalities of the text adventure, there is no reason why you should not add graphics to make it more colourful.

Unfortunately, writing your own adventures means that you do not get the fun of playing them, since knowing the answers to all the puzzles makes winning far too easy. But the expeience you have gained will hopefully enable you to advance that bit further with your selection out of them. You may even become a master in adventure wizardry, although that might be a little too much to hope for.

Arcade type adventures are a different kettle of fish altogether. They require skills in graphical animation and I don't think that writing your own will in anyway assist you in playing them. For it is a different type of skill which is required. Correct timing and quick reactions come only with practise, so keep at it.

Having problems?

There are various routines which I always follow on encountering a problem. They are not always successful of course but they provide a good basis of where to start eating away at your problem. I hope that you will find them useful.

Problem No. 1: Tape will not load correctly or won't run after loading.

A common enough problem which frustratingly enough occurs before you have even reached the title page of your adventure. Here is how you should try and remedy this.

(1) Check all leads are connected correctly. If they are not then adjust them accordingly and try again.
(2) Turn the tape over and try the other side. One side of the tape may have been corrupted.
(3) Try adjusting the volume control on your tape recorder, it may be that your particular cassette is recorded at a different level than that which you are used to or that the volume control on your tape recorder is badly set.
(4) Try using a different tape recorder. Although this happens rarely, it is possible that certain tape recorders cannot cope with certain programs but use of another tape recorder could solve this.
(5) If none of the above prove successful then write to the manufacturers explaining your predicament, an address is usually provided for just such a purpose. They should send you another copy free of charge.

Problem No. 2: You come across a character in a location who seems to be blocking an exit or preventing you from performing an action:

This problem is obviously associated with actual play of the adventure.

(1) Take note of what the character is and see if you can think of anything associated with the character or type of creature that you think will get rid of it and try out your theory.
(2) List your inventory and write down anything that you are carrying. Use each object in turn against the character until something happens, use your onjects within reason though. Don't try to stab the creature with a whistle, blow the whistle. It might just scare him away. Also try giving the creature some of your objects, but don't be too free with them for you might not get them back.
(3) Look around your location and see if there is anything that might help you there.

If all the above fails then there are two possible reasons why:-

(a) There is no solution to this problem.
(b) You have not been far enough with this adventure or performed the correct actions to enable you to solve this particular problem.

The first is highly unlikely and extremely unsatisfactory. The second has just one message to tell you, persevere and keep on playing.

ADVENTURE

Problem No. 3: An object, or wall or something of an inanimate nature is blocking your path.

(1) Examine it carefully for any clues that it may give you.
(2) Examine your location carefully to see if there is anything that might help you there.
(3) Take note of what the object is and see if you can think of anything associated with the object that you think might move it or reveal its use. Try out all your theorys.
(4) List you inventory then try out each object in turn against the problem until something happens.

The same principle applies here as with problem 2.

The one prime rule in adventuring which should always be applied before anything else is EXAMINE EVERYTHING as you meet it. Do not pick up anything before you have examined it. You could save yourself from quite a few sticky situations if you remain cautious.

Two steps that I did not mention in any of those problem solving routines were:-

(1) Ask for HELP. I did not mention this becasue it really should only be used as a last resort and in any case you might not get help just when you want it. But if you really are well and truly flummoxed by a problem, then just one clue is forgiveable.
(2) Load the other side of the tape next time you play. This may seem a strange one to add but there may be a bug in the program which is not immediately apparent and does not allow you to overcome a certain problem. You may find that loading the other side of the tape is the answer.

Q

Dear Marion,
With reference to your article in April's edition of 'Computer Gamer' could you please offer any help with the adventure 'Hampstead' by Melbourne House. I can only achieve 33% and always get stuck once I've reached the station. I've tried numerous ways round the problem and entered London via Regent, Oxford, Piccadilly etc., but all to no avail.

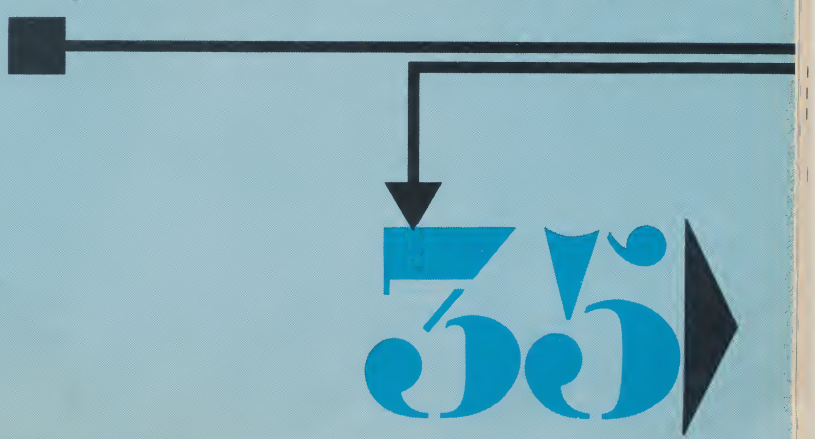
So far I've collected my UB40, worn the tracksuit, ridden the bike, exchanged UB40 for giro which I've subsequently cashed, been in the Oxfam shop and exchanged my tracksuit for tweeds and taken the art and antiques magazine from the newsagents before going into the station where I've acquired a travel pass.

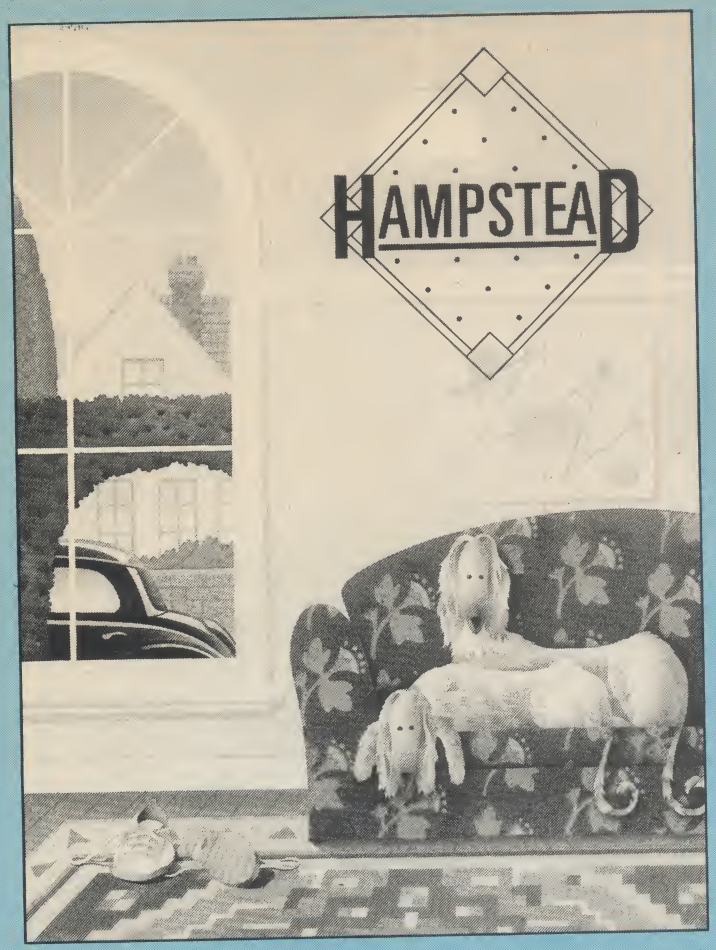
Any help you could offer would be most dearly welcomed.

Thanking you.
Yours,
Mrs C. Paulton

A

This is the procedure I suggest you follow. Before you go to the station to catch your train, I suggest that you return to the junction between the main road and the high street. Here you are to go east towards Hampstead. Now you will see on the screen that further east glows the promised land of Hampstead. DON'T GO EAST HERE! Go north and you will come across a park bench. Sit down on the park bench. (This should be possible just by typing SIT). Underneath it you will then see a credit card. Take the





credit card and go south, then west to return to the main junction. Follow your normal course of action here until you reach Waterloo. Catch the bus and go north until you come to the area where the better class of people shop. Enter the mens outfitters and purchase a business suit with your credit card. Don't forget to wear it before you leave the shop though.

I hope these hints will get you a little further and that the addition of the credit card will get you more noticed around London. Good luck with playing Hampstead.

Q

Dear Marion,
I have just bought and read the first issue of your magazine and I must say found it very enjoyable. After reading the adventure column, which is always the first thing I turn to, I felt I must write to you on a number of points.

I hope that you are not going to fall into a trap of reviewing the so called 'ARCADE ADVENTURES' in the adventure column. Although there may be problems to solve, but I feel that anything that requires a joystick and no user input is not a true adventure, it's bad enough arguing about text only and text and graphic adventures, without starting on about 'Arcade Adventures' as well. Leave them to the arcade game players as the major requirement seems to be timing. I must admit I have got 'Technician Ted' but it isn't in my adventure box!

Well now I've got that off my chest I'll wish you all the best for the future of the magazine and especially of your column. Tell the Ed you need another page!

I'm off to slay some more dragons or something now, so I'll say bye, bye.

Happy Adventuring,
Yours,
Paul Clifford.

A

Dear Paul,
Thank you for writing to me, I agree entirely with all that you said about arcade adventures. I believe that I mentioned in the first issue that arcade adventures were certainly not my favourite type of game and as a result I am rather poor when it comes to playing them. I do not intend to spend much time discussing them although they may crop up in passing of course. They are still adventures of a sort though. There is some thought involved in working out how to overcome various obstacles the difference being that your attempts are all input using physical responses rather than verbal input. Still I do see your point.

What do other readers think?

Q

Dear Marion,
Please help me and the family, we are completely new to the Adventure Game, having bought 'Heroes Of Karn' and after many frustrating hours, have finally given up trying, feeling I'm missing something somewhere, but believing I've tried everything. Having found 'Beren' I either can't get passed the 'Bear' or the 'Barrowight' or get thrown into the nearest dungeon. Please help me to get a little further into the adventure. I look forward to hearing from you shortly as any help is desperately needed.
Yours sincerely
Mrs J. Smith

A

First of all you need to get rid of the Barrowight. You need with you the Bible which can be found in the monastry. Attack the Barrowight with the Bible. You are now able to take the money. Do so and then let yourself be thrown into the dungeons. If you get thrown in the dungeons without the money then you are, I'm afraid, stuck there for good and you will have to start the game again. When you have the money then you must give it to the Guard and he will let you out. These guards are highly susceptible to bribery. If you wander about down here for a while you will come across a jar of honey. Take this and return with it to the bear. Give him the honey, it will send him off to sleep and you will be able to get past. I hope what you find beyond the dungeons and the bear will prove interesting. Good luck.

-H-I-T-C-H H-I-K-E-R-S- GUIDE TO THE GALAXY

David Bishop

The term "state of the art" is often misguidedly applied to things not worthy of the accolade. However, having spent many hours exploring the bizarre world of Douglas Adams' **Hitchhikers Guide To The Galaxy**, I am convinced that the art of computer adventures should always be in this state!

Hitchhikers, the computer game, comes from the Infocom stable, famous for such thoroughbreds as Deadline and the Zork trilogy. All Infocom's products feature highly sophisticated langauge interaction and have been labelled "Interactive Fiction", rather than adventures. A description which perfectly describes a good night's interaction with Hitchhikers.

Adams and Infocom collaborated on the project from start to finish and this marraige of talent has proved an unqualified success with much of the text being original rather than taken straight from the book or the play or the radio series or the feature film or the T-shirts, or the . . . !

Having spent so long hitchhiking around the galaxy, I'm not about to make it easy for anyone else but a few ditties should serve to wet your appetite.

As in the book, the game starts with you, Arthur Dent, trying to persuade a particularly silly civil servant that demolishing you home to make way for a motorway wouldn't be at all friendly!

Still, none of this matters because the Earth's going to be destroyed in 12 minutes to make way for a new Hyper-Space Bypass being built by a Vogon Constructor Fleet.

Having hitched a lift off the Earth with your friend, Ford Prefect, who, you have just discovered, is really a researcher for the Hitchhikers Guide to the Galaxy, you are captured by the Vogons.

The Vogon captain insists on reading you some of his poetry (the second worst thing in the Galaxy, according to the Guide) before throwing you out into space.

So, Babel fish in ear, you are flung out into space and are picked up by the Heart of Gold, a revolutionary new ship powered by the Improbability Drive. To reveal just what exactly you would have to do would spoil your enjoyment, but suffice it to say that in order to do it you must "become" other characters in the plot!

The best way to illustrate this is with a couple of examples . . . On the bridge of the Heart of Gold, you find a handbag containing a pair of tweezers. Later on you wake up at a party and you are being chatted up by Arthur Dent (he who you just were) from whom you get a very important thing (V.I.T.) which you put in your handbag. Back in the future, as Arthur Dent again, you examine the contents of the handbag on the bridge of the H.O.G., only to discover that tweezers have been joined by the V.I.T.

As if that wasn't enough, how about being on board a microscopic spaceship heading into battle when it's swallowed by a dog! Suddenly, you remember a dog yapping outside the pub where you and Ford went drinking six minutes before the Earth was destroyed. In fact, if you have brought a cheese sandwich from the pub and fed it to the dog, this is what would have happened: "The dog is deeply moved, With powerful sweeps of its tail, it indicates that it regards this cheese sandwich as one of the great cheese sandwiches. Nine out of ten pet owners could happen by at this point expressing any preference they pleased, but this dog would spurn them and all their tins. This is a dog which has met its main sandwich. It eats with passion, and ignores a passing microscopic space fleet."

This is just one example of the detail and humour of the text in Hitchhikers, which will appeal to all lovers of Adams as well as more serious adventures who will find enough puzzles to keep them going for months.

Hitchhikers is a bug-free, highly interactive and extrutiatingly funny adventure. I'm convinced it's a major contribution to mental derangement and definitely worth buying a disk drive for.

Hints and Tips

1. Consult the Guide about anything and everything.
2. Don't be shy.
3. Take everything you find — all things are useful.
4. Alan Freeman?
5. You'll need four objects **just** to get the Babel fish.
6. Make use of such prespositions as "under", "through" and "inside" when using such verbs as "look".
7. There is no hint number 7.
8. Read every word of the instruction manual and the text that appears on screen — both are riddled with clues, and funny too!
9. Using your five senses will get you out of many a tricky situation.
10. Never be without your towel.

Dungeon Dressing

When is a door not a door? Gordon Hamlett answers this and other important questions in this months Dungeon Dressing.

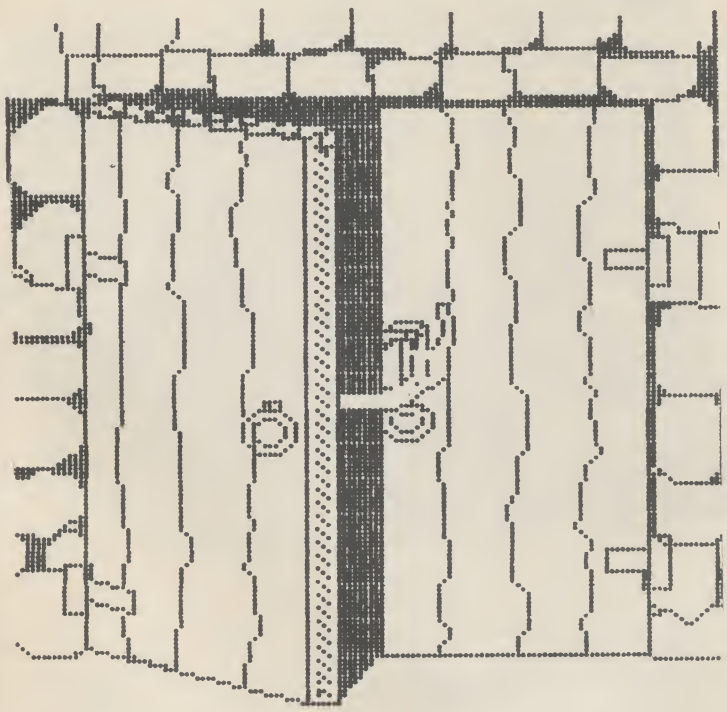
Last month I looked at ways of making your location descriptions more interesting. Over the next couple of months, I want to deal with the problems within an adventure.

If you wish to populate your dungeon with lazer-wielding bunnies, then fine, I am not going to try and stop you. What I think you ought to watch out for are things like rooms full of snow in the middle of a desert or a robot running riot in a story all about elves and goblins. In other words, try and avoid major inconsistencies. Before you argue that you have got a special cryostatically controlled room, let me say that this example came from a commercially produced game and was set in an Egyptian tomb!

This is a very difficult concept to understand as surely it is all make believe anyway. Probably the best way of explaining it, is not to, but to give lots of examples and hope it becomes clear. Whilst you can set a whole game round the killer rabbits, the one room full of snow is out of place in the rest of the setting. It may be a great trap, but you cannot use it in that particular story so take it out, make a note of it in your next one instead.

Fascinating Features

Be honest, one of the most boring parts of a room description, is doors. Doors are for kicking down, or for unlocking with the correct coloured key so this month, I've written out a list of a few ways of making doors more interesting. In passing, the only doors that I can remember from my adventure playing, are in Zork II, with the lizard's head sticking out of it, and the intelligent doors in Hitchhikers Guide to the Galaxy.



Descriptive Doors

Size
½ size
double
normal

Shape
rectangular
arched
square
saloon
barn
round

Material
wooden
iron
brass
studded

Locking Mechanisms
special locks
magical locks

Colour / Decoration
whatever takes your fancy

Special Features
grille or spyhole
doorknocker
handles
one-way doors
talking
intelligent
notices/inscriptions
electrified
portcullis

Selecting a few items from the above lists should do wonders for your portals.

Trap of the Month

A lot of you seem to have misunderstood what I meant when I asked you to write in with your ideas for tricks and traps. I did not want "you are walking down a long corridor when a pit opens up in front of you and you fall 300 feet onto some poisoned spikes. You are dead". Instead I was looking more for problems to be overcome. Here are two on a similar theme of disguising access to other areas of the dungeon.

Chris McBride from Glasgow came up with the idea of someone searching for secret passages. They find one, but it is only a small alcove containing treasure. Convinced that he has solved the puzzle, the player carries on elsewhere. Had he searched the alcove, he would have discovered a sliding panel which concealed a tunnel leading to new locations. Tricky huh?

Henry Cherry from Derby says in his letter that in his experience, adventurers tend only to think in two dimensions and look for secret doors only in walls. He suggests a large room supported by carved pillars. One of the pillars contains a secret door, behind which is a narrow spiral staircase leading up into a hidden room.

I'll be looking at more of your ideas next month so keep those letters coming in.

I have been asked to recommend some reading material apart from the obvious Tolkien etc and I hope to be able to give the odd book review in the coming months. If you have any good suggestions in the meantime, please write to me care of Dungeon Dressing.

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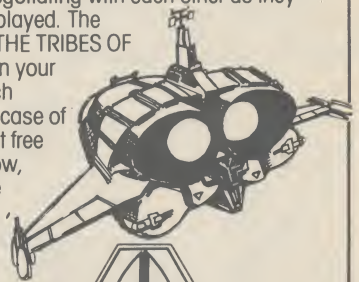

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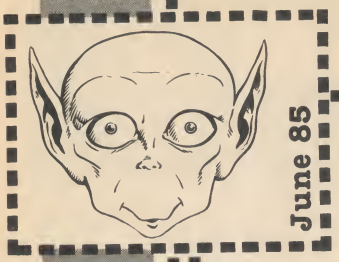

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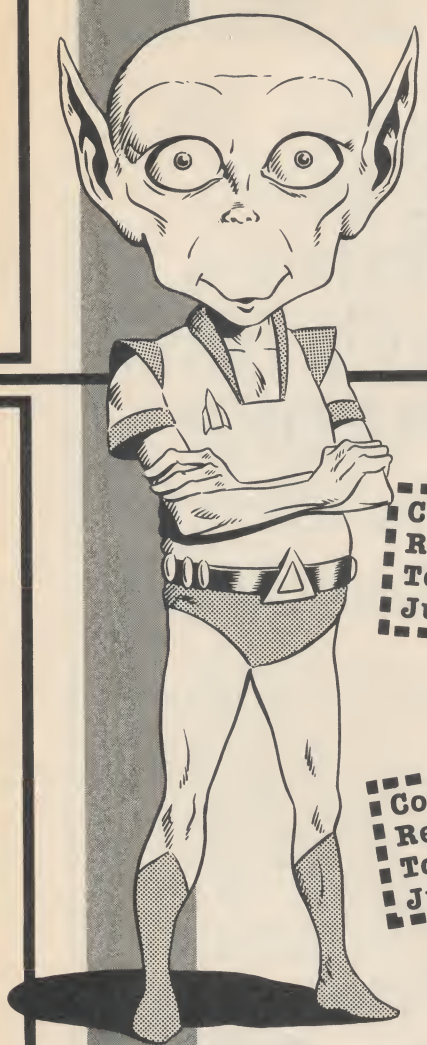

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PLAY-by-MAIL G..A..M..E..S

Play-by-Mail games are adventures that you play by post. Martin Croft tracked them down and presents his findings.

Play By Mail (or PBM) games have been around for a long time — far longer than micro computers. But it is only since the silicon chip brought computing to the masses that PBM games have enjoyed widespread popularity.

The idea of a PBM game is simple. The players, however many there are, send in instructions to a central referee who works out what happens and sends the results back.

Chess has been played by post for more than a hundred years, and most popular boardgames have been given the PBM treatment.

Some games, of course, just don't work postally, as experience soon shows. **Postal Poker,** for example, has some serious drawbacks: as for **Scrabble by Mail,** you really have to be an addict. I always found my letters ended up in the wrong places.

Most games, however, do adapt well — and some work far better postally than when played face to face.

The boardgame which adapted best to postal play was **Diplomacy,** a power politics game in which seven players vied for control of a map representing Europe in the early twentieth Century.

The game mechanics were simple, but the real appeal — as the name suggests — lay in the immense capacity for treachery and double dealing the rules allowed. The objective, put baldly, was to betray yourself to the top.

Diplomacy was so popular some years back that you could play it postally in dozens of small, independently produced magazines (or Dippy zines, as they were affectionately known) usually put together in the small hours of the morning by gifted fanatics on a shoestring budget.

Most of the Dippy zines had circulations that hovered around the 50 mark, although there were a few well into the hundreds. They had wierd and wonderful names which reflected the editors' inclinations — names like **He's Dead, Jim, Perfidious Albion, Sauce of the Nile** or **Howay the Lads!**

Players would go to great length to win, often resorting to bribery and even blackmail.

Alongside blackmail went forgery and interference with Her Majesty's Mail. Players would forge other players' letters or orders, or even letters from the gamesmaster; another trick was to alter postmarks (using a franking machine) so that orders which missed the strict deadlines were accepted (most people took postmarks as proof of the date of posting, and attributed delays to the GPO).

Two players managed to get into trouble with the police — as suspected terrorists! They were involved in complex negotiations about an attack on the gamer playing Britain. To avoid postal delays, one sent the other a telegram which read ATTACK ON LIVERPOOL CONFIRMED. Both spent some time explaining to the police that it was only a game.

The popularity of **Diplomacy** began to wane at the end of the 1970s. Gamers wanted something more complex, to reflect the growth in sophistication of the boardgames being published. An additional factor was **Dungeons and Dragons,** the first of the Role Playing Games. Abstract games lost out to a new breed of simulation games.

The PBM games of the 1980s are, almost without exception, titles which have been specially written for postal play. As such, they are mostly immensely complex games involving tens, hundreds, or even thousands of players. They could not exist without computers, either to run them or just to handle the paperwork.

In these modern PBM games, you can be anything from a single person to an entire space faring race. You can control the fate of one of the nations of earth in the Atomic age, or you can rule a tribe of hunter-gatherers scrambling up the ladder of civilisation.

In America, PBM gaming is well on the way to being Big Business. US PBM companies are, usually, well organised and efficient.

One game, **Earthwood,** is being played by over 4,000 people. When you consider the start-up costs, including the rule-book, come to $10, and that the turns (usually one a month) cost $3, you can see we're talking medium sized bucks, if not big ones.

Some PBM games are still run by people — these are called human moderated or Games-Mastered games. Others are entirely run by computers, with people just there to type in the players' orders. Some don't even need this amount of human input — the players put their orders onto computer cards by filling in boxes indicating which of certain set options they wish to choose.

The two different types of game appeal to different groups. For those who like the freer, less structured game, where new ideas can be readily incorporated into the system, the human moderated game is best. For those who appreciate structure, who like using their intelligence to outwit opponents, not their imagination, the computer moderated games are probably more suited.

Both types, of course, have their drawbacks. Human gamesmasters can make mistakes, or show favouritism, or be ill; computers don't make mistakes, but they can only work in set routines, defined by the program — which may be faulty.

Games also differ in length. Some are limited both in the number of players allowed, and in time. **Earthwood** is a good example of a limited game: there are 25 human players in each game, and once one player or alliance of players has captured all the cities in the fantasy world setting, the game is over.

Other games just carry on, with new players joining and old ones dropping out all the time. Open ended games like this tend to attract those more interested in role playing rather than games playing, since the objective is not so much winning as surviving.

In a game where all the players start at the same time, the positions occupied by each are usually relatively equal. In open ended games players can find themselves with vastly differing resources.

One major drawback to some American games is that you can get a better starting position by paying the PBM company more real world money — which biases the game in favour of those with more cash. It also means that players who drop out will sometimes try to sell their game position, through adverts in games magazines.

Players can also be at a disadvantage because of the vagaries of the postal services — particularly in America, where it can take five days or more for a letter to go from coast to coast. As for transatlantic mail, that can take weeks.

This doesn't affect those games which have deadlines so much, as these will only allow, say, one turn a month. There are games, however, where you can send in your next turn as soon as you get the results of your last one back. If you live close to the PBM company running the game, you could end up getting two or three turns for every one someone three thousand miles away is getting.

To try to ease this problem, some UK companies act as postboxes for US companies, and vice versa. This means that UK players would have to send their orders in to the postbox by a deadline, usually earlier than the US one, and all would be sent on to the US. The UK PBM hobby is less well organised than the American, but there are a number of companies with interesting games on offer. Most of the games are of American origin, but British designers are beginning to fight back.

The oldest British PBM company is now called International Computers by Mail — a name chosen to provide the acronym ICBM — although it used to be Flying Buffalo UK. It is the English half of a transatlantic partnership. The US end is Flying Buffalo Inc — or FBI.

ICBM runs a number of games in the UK, and acts as a postbox for FBI games as well. All its games are comptuer moderated, as you might guess from the company's name.

The most famous game run by ICBM is **Starweb,** a very early space conquest game in which the players choose to be different character types. You can be an Empire Builder, out to control the universe; or a Berserker, the leader of a race of killing machines which exist only to destroy organic life-forms; or a Merchant, a Pirate, an Artifact Collector or an Apostle. Each character type has strengths and weaknesses.

Other games run by ICBM include **Terra 11** and its offshoot **Conquest 11,** basically strategic wargames with a medieval setting; **Universe 11,** in which players explore, colonise and conquer an alternate universe; and **Feudal Lords,** a diplomatic game of the struggle for the throne of an Arthurian type Britain.

ICBM's offices are located in a working iron foundry in the West Midlands. The base for one of its main rivals, Mitre Games, is a former Estate Agents in Balham High Road.

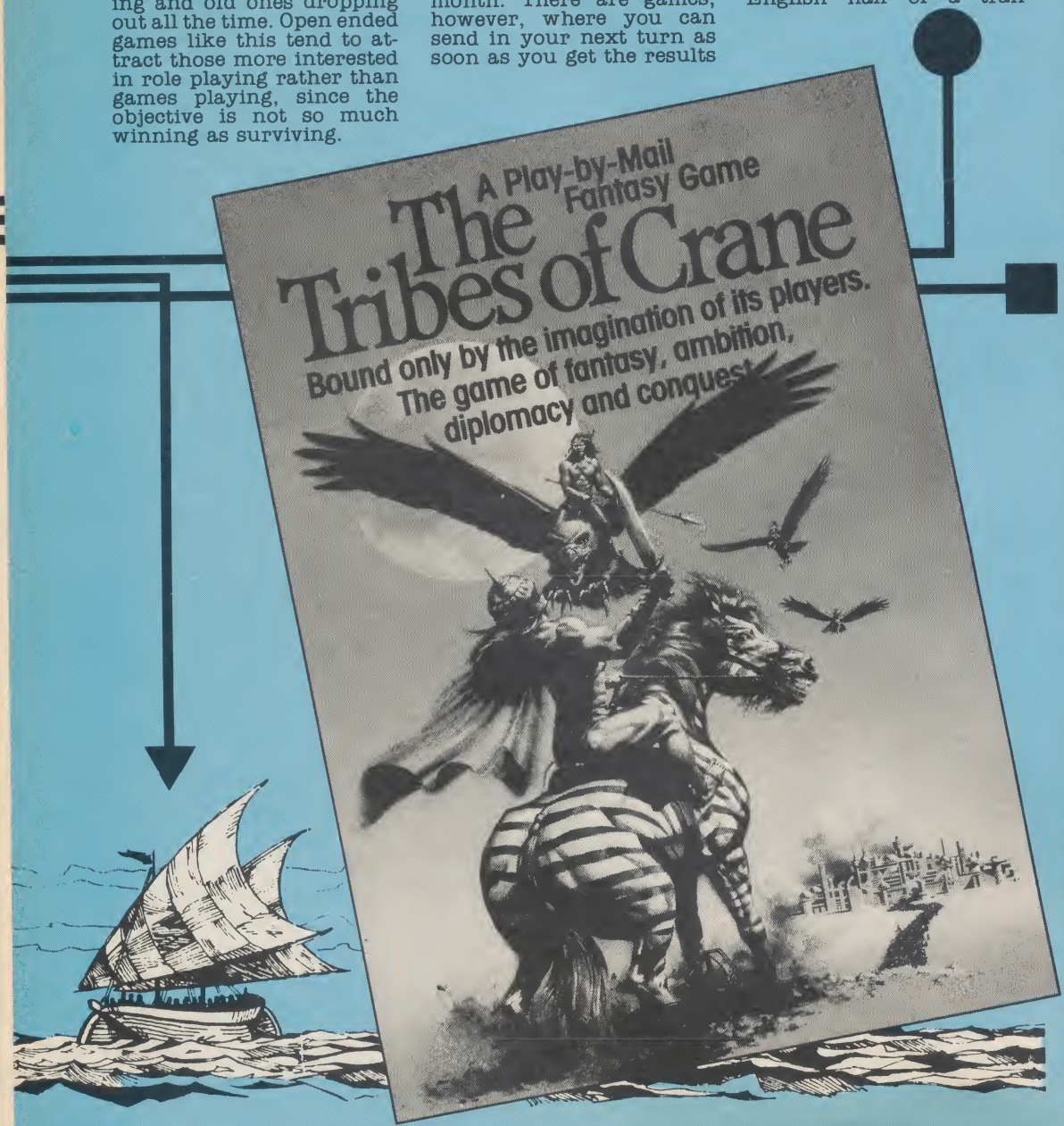
Mitre only run two games at the moment, but both are very popular.

Tribes of Crane is an open ended game set on a fantastic world, many aspects of which may well be familiar to Science Fiction and Fantasy readers.

Although magic doesn't work, there are many wonderful creatures, including the giant warhawk. These creatures can be ridden into battle, as can zebras and rhinoceroses.

Crane is human moderated, and there is an immense amount of imagination apparent in it. There are around 600 players, many from Europe and even further afield. Since the game is only restricted by what the players can think up and the gamesmaster allows, some very strange things have happened.

There is a city built by a group of German players; other gamers whose tribes approach it are warned of the inhabitants lack of a sense of humour. One player has been searching for months for the Great White Albatross, a marine version of the warhawk — but it doesn't exist. He has been following a fairy tale. Another has solved the problem of navigation in the polar latitudes, and regularly uses the icy



CRASIMOFF'S WORLD

The international game for the modern thinking mind

wastes as a short cut while everybody else gets hoplessly lost.

Crane players tend to become fanatical in their devotion to the game. Feuds are a recurring feature in the game, as is treachery and betrayal.

One player rose to become leader of the most powerful player alliance in the game — and was then murdered by his trusted lieutenants. His wife rang one of the traitors at dawn the next day and hurled abuse at him.

The other game Mitre run is **Starmaster,** a science fiction game. Each player begins by designing his or her race, spending a set number of points on a shopping list of different racial characteristics and abilities. For example, it's entirely up to you how many legs you have — if you have any at all. At least one race has wheels! You choose what sort of body, the number and type of limbs, brain power — everything you could imagine is catered for. The only real disappointment is that so many of the players end up with recognisable Science Fiction stereotypes — Terrans, Vulcans, Klingons, Kzin and so on.

Mitre is linked with one of the larger US PBM companies, Schubel and Son. It also has a marketing deal with Games Workshop, which is selling boxed sets of **Tribes of Crane** and **Starmaster** rules, hints and two free turns for a very reasonable price.

The game with the most players in the UK at the moment is probably **Crasimoff's World,** which has the distinction of being UK produced. It was also the first British PBM game to be sold to an American company — usually the licensing deals run the other way.

The player controls a small party of humans wandering the surface of the eponymous planet. There are four types of character — Chieftain (you), Fighters, Mages, and Clerics. Magic works, and your Mages and Clerics can cast spells. Action is fast and furious, and the turnaround by the human gamesmasters (two of them) is very prompt.

Crasimoff is another game which inspires fanatical loyalty. As with **Crane,** this is largely due to the amount of work the gamesmasters are prepared to put in. If you have a good idea which appeals to them, you have a greater chance of succeeding with whatever you plan to do than if you send in the same dull and lifeless instructions every turn.

KJC Games, who run **Crasimoff's World** from a games shop on the Blackpool sea front, also run Earthwood in the UK.

KJC are about to launch a new science fiction game called Capitol which will be run by an IBM PC.

The other major game being run in the UK at the moment is **Keys of Bled.** Launched at around the same time as Crasimoff's world, it was a similar scenario — a small party wandering a fantastic planet — but is supposed to appeal more to those gamers who prefer careful planning and strategic thinking to charging in with all guns blazing (or should that be all spells?).

Keys of Bled is run by the aptly named Spellbinder Games of Ramsgate, Kent.

There are a number of other PBM games running in this country including **Starglobe** and **Globemaster** from Birmingham based Time Patterns. Starglobe is a space exploration game whereas Globemaster players forget about space travel and get down to the fighting. **Starlord**, another space game written and moderated by Mike Singleton, better known to computer gamers as the man who wrote **The Lords of Midnight** and **Doomdark's Revenge.**

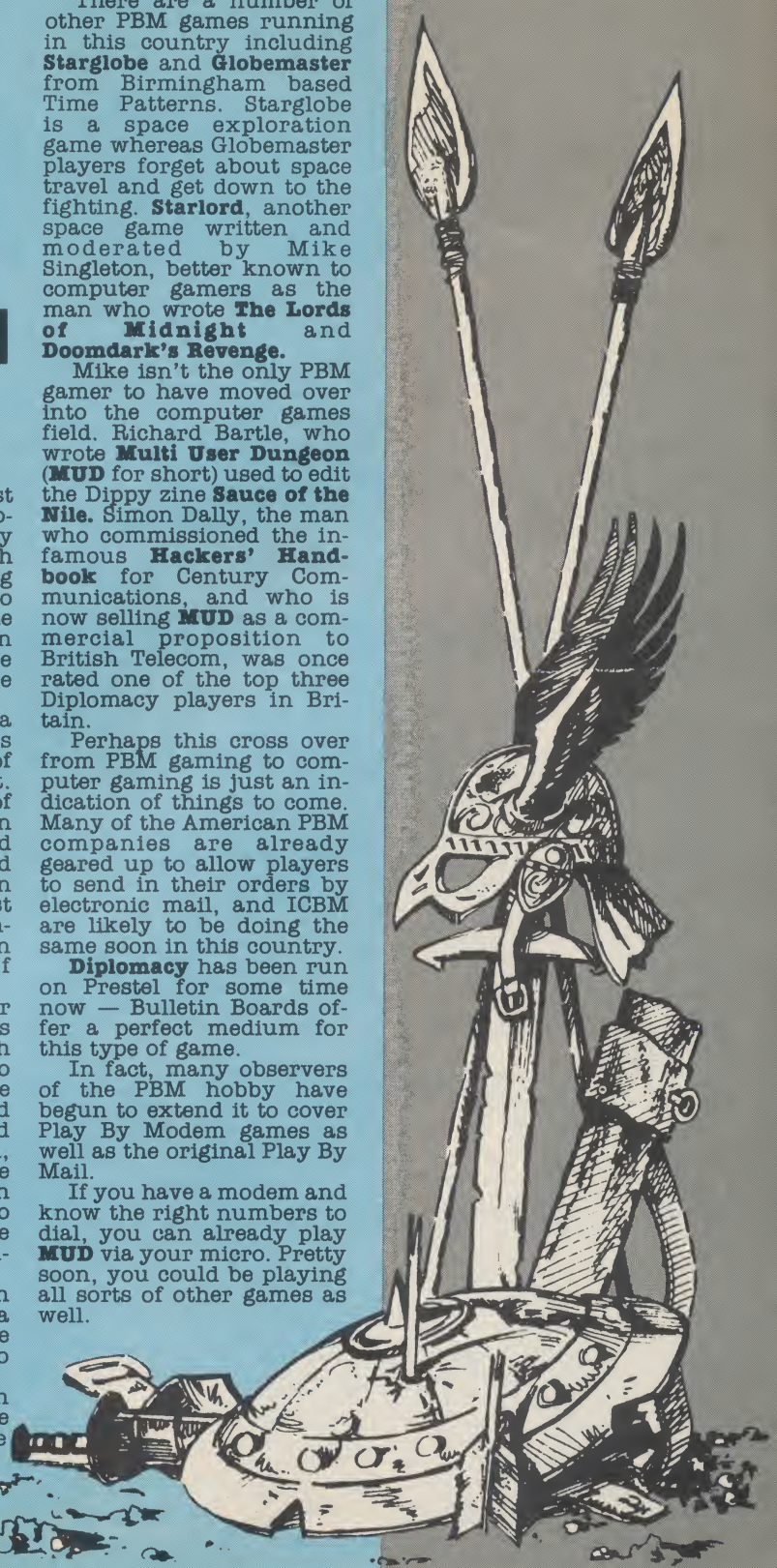
Mike isn't the only PBM gamer to have moved over into the computer games field. Richard Bartle, who wrote **Multi User Dungeon** (**MUD** for short) used to edit the Dippy zine **Sauce of the Nile.** Simon Dally, the man who commissioned the infamous **Hackers' Handbook** for Century Communications, and who is now selling **MUD** as a commercial proposition to British Telecom, was once rated one of the top three Diplomacy players in Britain.

Perhaps this cross over from PBM gaming to computer gaming is just an indication of things to come. Many of the American PBM companies are already geared up to allow players to send in their orders by electronic mail, and ICBM are likely to be doing the same soon in this country.

Diplomacy has been run on Prestel for some time now — Bulletin Boards offer a perfect medium for this type of game.

In fact, many observers of the PBM hobby have begun to extend it to cover Play By Modem games as well as the original Play By Mail.

If you have a modem and know the right numbers to dial, you can already play **MUD** via your micro. Pretty soon, you could be playing all sorts of other games as well.



HI-SCORE

More people than ever have written to us in the last month with their best scores. Replacements include Knight Lore, Raid on Bungling Bay, Decathlon, Snapper, and Chuckie Egg.

There are also some new additions for games we had no details off, Seaside Special, Donkey Kong, and others.

Remember all you have to do to enter is fill in the appropriate space provided on the page, get another person to sign it to say that they have witnessed this (a screen shot would be preferred and takes priority).

Then send the entire page to:

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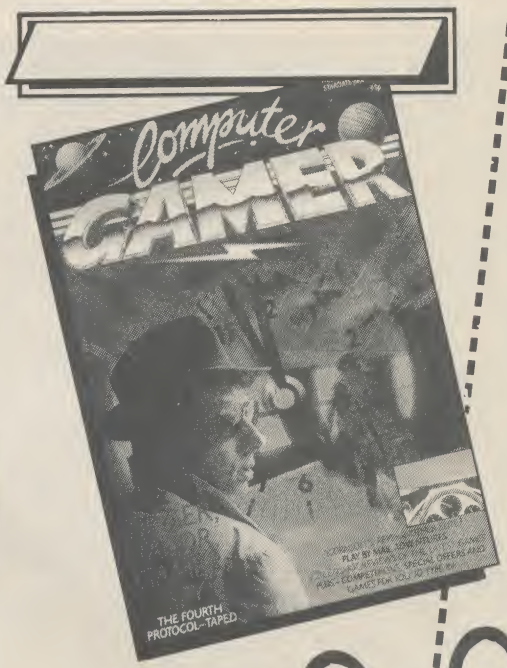

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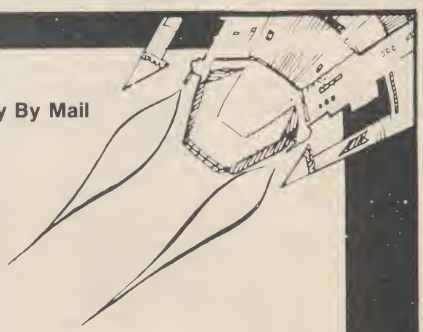

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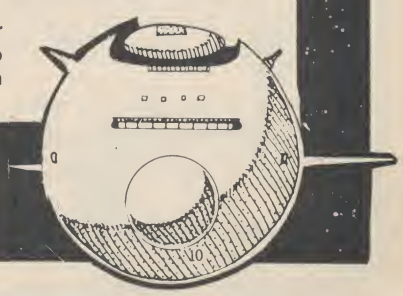

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Here is a guide to the symbols used to illustrate the game reviews.

"R"E"V"

Eecaans Star Guide

Black Hole — This should be avoided at all costs as anything that gets too close to it is immediately sucked into the vacuum. A game given this description is totally void of any interesting features.

White Dwarf — This is a small dying star that is now far from it's best. Any similar games may lack lasting appeal.

Bright Star — Like you sun, games given this description will be bright and interesting and will support intelligent life.

Red Giant — Brighter than a bright star such a game will have an outstanding feature or game system.

Nova — If you see a game with a Nova rating you should immediately rush out and buy it. Novas are bright and spectacular and can influence neighbouring planets.

Supernova — This is the ultimate in stellar systems for this incredible explosion of a star can effect entire galaxies. If a supernova game runs on a computer that you don't have then buy the machine and then buy the game!

Nebula — Although at first nebulae look bright and interesting they are in fact constructed totally from hot gasses. Beware of any game carrying this symbol as you will probably find it disappointing.

Planet ratings

Planet ratings are marks out of five for specific areas of a game. These include Originality, graphics, use of machine and value for money.

Originality — How original is the game? Is it a completely new idea or is it the 83rd version of Pac-man.

Graphics — Do the Graphics amaze your friends or send them to sleep.

Use of machine — does the game push the machines hardware to the limits or was it written in three lines of Basic.

Value for money — Is it daylight robbery or a steal?

Game symbols.

These symbols indicate which category the game belongs in. It is however possible for a game to be in more than one group in which case more than one symbol will appear by the review.

Adventure

Action

Simulation

Strategy

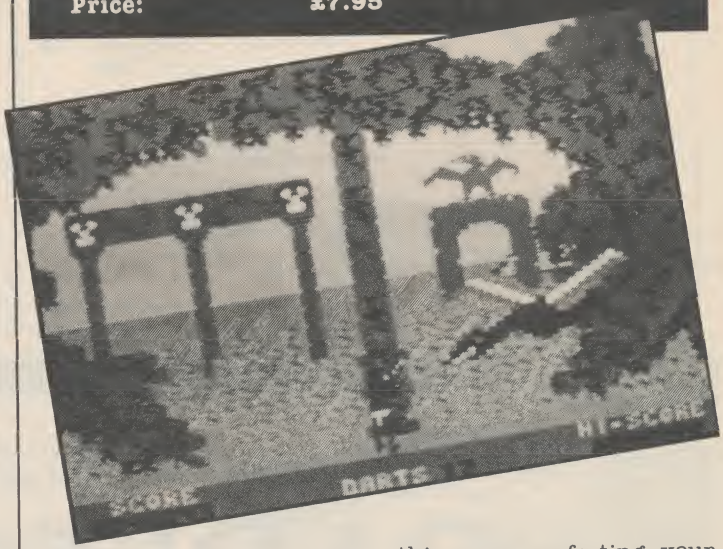
Sports

Wargame

Number of players minimum/maximum

Joysticks required/optional.

Title: Amazon Warrior
Computer: Commodore 64
Supplier: New Generation
Price: £7.95



A blowpipe and forty darts are all you have between you and a grisly death in the new fantasy action game from New Generation.

The game is played in a series of screens in which an assortment of nasties attempt to eat or drain you of your blood.

The first threat lies in a forest and comes from deadly red snakes complete with sinister black and yellow spots. These snakes usually attack in pairs and so you should ensure that you don't get trapped between them.

Your main problem is that when you've fired a dart you have to stop to reload but while you're doing this your perfecting your sitting duck impressions.

Hours of practice have developed the load and run technique which involves a lot of running away whenever a snake's fangs come to close. Then a well timed turn and fire often results in a hit. Enough of these hits and your on to the next level.

This is infact easier as the foe are giant scorpions that are larger than the snakes and crawl towards you along the ground. A few well aimed shots will soon despatch these. However, if your caught you will be stung and then eaten in full gory graphics.

Next on the agenda are the head hunters which are a particularly violent bunch that not only attack you with swords but also throw spears at you.

REVIEWS

You then leave the forest behind you and enter the caves. This is a particularly silly idea as you are immediately swamped by vampire bats that are then replaced by wraiths. The wraiths are undoubtedly the hardest to kill as a hit will only score if it is on the wraiths head. Darts aimed at the body will only pass through it as it carries you away screaming.

Your troubles are still far from over as you have yet to face spiders and blocks that drop on you and then a rather large dragon. This plummets to the ground with a satisfying thump when you finally manage to kill it. Your reward for completing all this is to be transported back into the woods with the snakes, but this time they're really mad.

It will take most people many months to complete this cycle as you only have three lives. I was also provided with an unlimited lives cheat option which allowed me to complete the game using only 87 amazon warriors.

The games graphics are superb and create some interesting 3D displays but I would imagine that most people will be too busy trying to stay alive to look at the scenery. They will however notice the sound which consists of eerie tunes and realistic sound effects. For example if you run away from the bats in the cave the sound of their flapping wings will die away, but if you stop they will return.

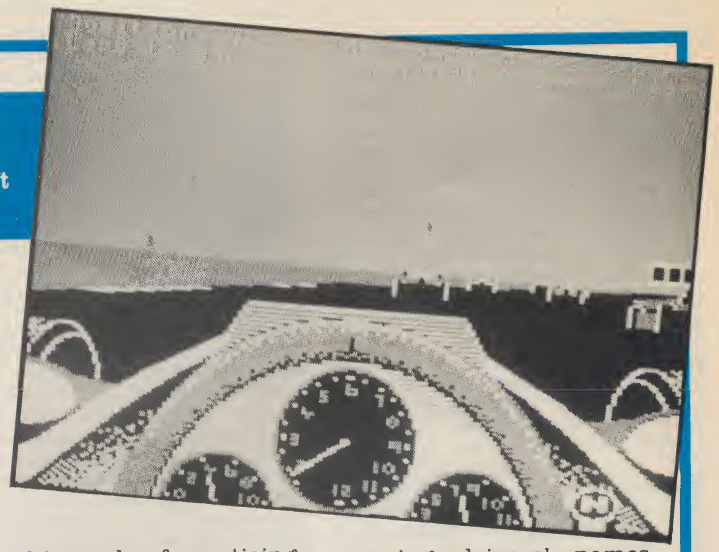
Excellent graphics, great sound, impossible game, need I say more. Buy it as soon as it is released on June 20th. **T.H.**

PLANET RATINGS

Originality	
Graphics	
Use of machine	
Value for money	

STAR RATING
Nova

Title: REVS
Computer: BBC
Supplier: Acornsoft
Price: £15.95



Revs has received the type of pre-release publicity that Elite got before its release — and with good reason.

The game itself is a highly accurate simulation of formula three racing — the very same formula that Acorn themselves sponsor in the form of David Hunt, James Hunt's brother. It was from this experience of racing that the game was born. The game was written in conjunction with David Hunt and the author of the immensely popular 'Aviator' 3D game.

The 3D effects of Aviator have been kept except that they're in full colour. The screen display is excellent and the track is represented perfectly. It is a scale copy of Silverstone with all the twists and bends of the original. One detail is that the hills and changes in level are also featured. Most (in fact all the ones that I have seen) racing games don't bother with hills at all. Not being able to see over a hill to see the road conditions ahead adds quite a lot to the game.

There are two modes of operation. The first practice is where you race around the track on your own to try to get a decent time.

This isn't qualifying practice but merely a chance to get used to the track and conditions.

In race mode you get a chance to run some qualifying laps, and you can allocate a certain amount of time to practice in before you start the race proper. In this mode of practicing your lap times are taken officially, and influence your position on the start grid. There are also other cars on the track practicing as well.

Once you start the race it really hots up. the parallel here will obviously be with Pole Position from Atari, this game was — until now — the best racing game that you could get for the BBC, indeed for other machines as well. Now even this classic has been surpassed. When you are on the starting grid and see all those cars spread out before you (and they will be!) the sense of realism is incredible.

Start the engine and your off. A point needs to be made here that it is a proper race, and once you have overtaken a car it will stay overtaken. In Poile Position and most other race games, even if you are in pole position (at the front at start up and on the inside for the nearest corner) you will find cars ahead of you once you have started.

All the cars you are racing against have individual characteristics and highly amusing drivers' names such as Max Throttle, Hugh Jengine, and others. the status line on the screen informs you of who is is from and behind you in the race.

Control of the car is through five forward gears and one reverse, accelerator, brake and a clutch type arrangement. Once in the pits you can change the wings on the front and rear of the car which changes its handling charactersistics.

All in all the best racing game I have ever seen on any computer, and I play a lot of racing games. A real must for any BBC owner.

M.R.

PLANET RATINGS

Originality	
Graphics	
Use of machine	
Value for money	

STAR RATING
Super Nova

Title:	**Boulderdash II**
Computer:	**Commodore 64**
Supplier:	**Monolith**
Price:	**£9.95**

Boulderdash II, which is subtitled Rockfords Revenge, is the sequel to the hugely popular Boulderdash which was one of the best games of 1984.

The game chronicled the attempts of the games hero, Rockford, to dig for diamonds while avoiding falling boulders, amoebas and deadly fireflies. Most of Rockford's problems stemmed from the fact that when the earth surrounding a boulder was dug away, that rock would fall and if Rockford was still under it then a life would be lost. However boulders had to be moved to get at the diamonds and so each of the games 16 screens posed a different logic problem which then had to be solved with a joystick. Some screens were confounded by deadly fireflies, growing amoebas and butterflies that while death to touch turned into diamonds when crushed by a boulder.

Boulderdash II includes all of the old features and a few new ones that will give even experienced Rockfords a run for their money.

The first difference between the two games that springs to mind is the increase in time that you have to complete each screen. This is on average 4 minutes which is a lot more than the 100 seconds allowed in Boulderdash. This is because the screens are even more involved and pose more difficult problems. These include a screen where you are literally showered in boulders and diamonds and another which contains only one boulder. Unfortunately there is a horde of fireflies on your tail from the start so any wrong turn will be your last.

There are also some new features including a watery style barrier on which objects will settle for a few seconds before sinking out of your reach. A particularly intriguing feature is an expanding wall that grows as the surrounding earth is dug around it which will surely catch unsuspecting Rockfords.

As with the original Boulderdash the secret of success lies in knowing your enemy. Particularly useful is the knowledge that fireflies will always turn to he left (at a junction) where butterflies will always turn right. However in a panic situation it is often difficult to remember which is left and which is right and then you have to manoeuvre in the right direction.

As a bonus, Monolith (see new pages), have included both versions on the same cassette so that new players can practice on the earlier, easier version, before tackling this one.

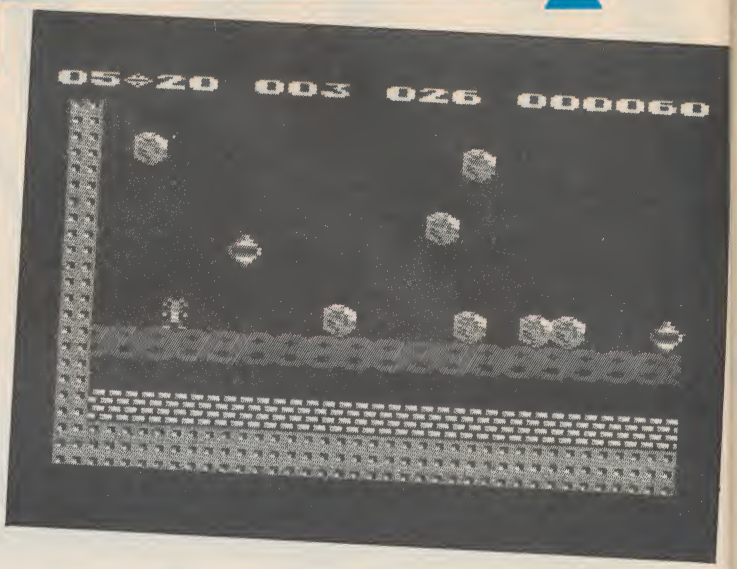
The original Boulderdash was one of my favourite games of 84. Boulderdash II is even better. Perhaps in time we will see Boulderdash III and IV, as far as I'm concerned Rockford will run and run.

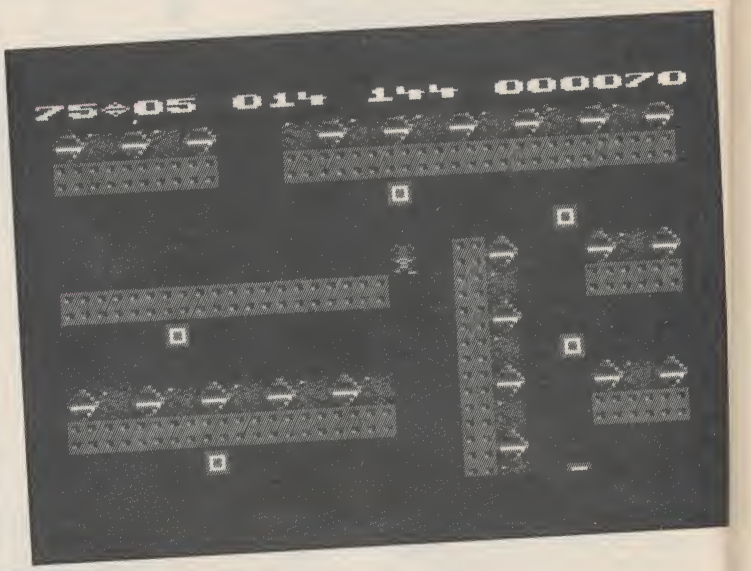
T.H.

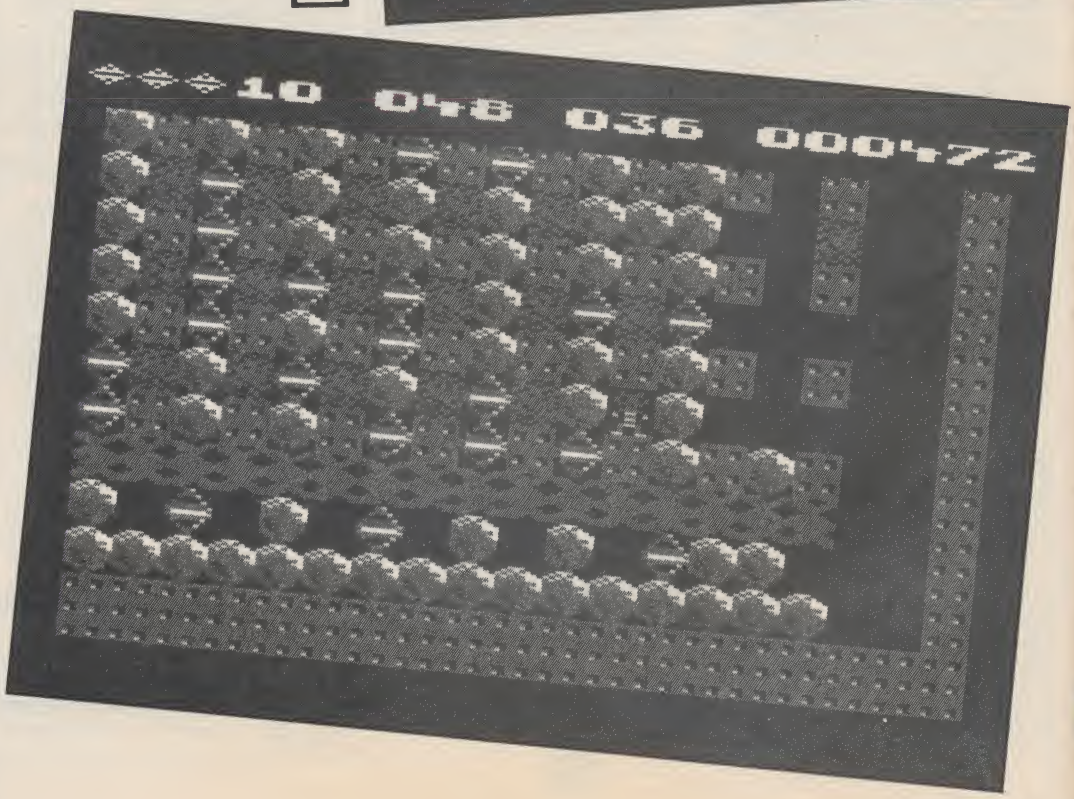
PLANET RATINGS

Originality	●●●●●
Graphics	●●●
Use of machine	●●●
Value for money	●●●●●

STAR RATING
Nova







Title: Stringer
Computer: CBM 64
Supplier: Addictive Games
Price: £7.95

Stringer is an ace reporter with the Daily Blurb and as such you have been given the task of getting an exclusive shot of Polly Platinum who is staying at a local hotel. Your equipment is hidden in various rooms of the hotel and you must collect all four items, avoid the hotel staff and take your photograph in time for your editor's deadline.

The game is a platform game, having the usual flights of stairs and lifts. Stringer must search every room until he collects his camera, flash bulb, press pass and the key to Polly's penthouse suite. Beware because behind one of the doors lurk Mr Angry who does not appreciate being aroused from his slumbers.

The graphics are chunky and pleasant but control of Stringer requires care when climbing the stairs. If you are not careful it is easy to walk off the staircase and plummet to your death. Stringer can walk or jump and in certain cases he can even jump past the hotel staff if he is cornered.

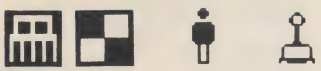
Though pleasant to look at, the game does not require a high degree of skill at the lower levels but heats up as the program goes onto more complex hotel layouts. The game is neither good nor bad, it depends on your reaction to platform arcade games. Perhaps a greater variety of problems to be solved could have saved this game from mediocrity. **J.G**

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Bright Star

Title: Parky and the Yellow Submarine
Computer: CBM 64
Supplier: Cheetah Soft
Price: £6.95



Parky the penguin has to rescue his brother, Perry, trapped somewhere in an endless maze of subterranean caverns at the bottom of the sea.

First you must help Parky to find the three parts of his yellow submarine avoiding a myriad of deep sea creatures which dart about the caverns menacingly. To help you in your task you are provided with a map on which you can mark the locations of such useful items as 'smart' bombs, lanterns and Parky's energy source — plates of fish and chips.

By rubbing the magic lantern Parky becomes temporarily invincible, eating a fish supper adds to his energy store and the smart bombs destroy all of the dangerous creatures and obstacles within a particular cavern.

Scattered around the screens are the letters of the word 'help' which, when collected in the correct order, cause all of the food, lanterns and smart bombs to re-appear in their original locations to give you a better chance to help Parky completehis task.

The game is very difficult to play, especially because the walls are lethal to penguins, and it will take many hours of intense concentration to complete the mission successfully. There are 91 caverns in all and many of them are identical in shape, variety being attained by varying the speed and type of creatures found in them.

There are three levels at which the game can be played which vary the amount of energy which Parky can attain, making it more difficult to survive.

Cheetah are offering a free copy of the sequel to Yellow Submarine to the first fifty people who submit a map showing the location of every item in the game. **J.G.**

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Bright Star

Title: Combat Lynx
Computer: Amstrad CPC464
Supplier: Durell Software
Price: £ 7.95

Let's get one thing straight before we go any further. This is an absolutely brillaint game. The fact that I am completely unable to play it is neither here nor there!

Combat Lynx is an incredibly detailed simulation of a war scenario in which you pilot a helicopter. The playing area is a vast simulted terrain (north and east coodinates are four-digit numbers), and located within it are from three to six bases which you have to support with troops and air cover.

Base 1 has an endless supply of fuel and can instantly cure any injured personnel you transport there (not too realistic, but without it you wouldn't stand a chance). The other bases depend on you to remain viable.

You constitute the only allied air support. The enemy seem to have almost unlimited aircraft to throw at you, and there is the added complication of ground vehicles, both Allied and enemy, which are involved in independent battles all over the map. Your mission, should you decide to accept it, is to ferry armed troops and casualties between the Allied bases as required, while maintaining sufficient weaponry on board to harass and destroy enemy craft. This is not easy!

Apart from some convenient fictions mentioned above, to make the game actually playable, this is as close to real life as you can get. I seemed unable to shoot anything down, another glance at the instructions revealed that I had forgotten to load any weapons at the start of the game. None of this Space Invader infinite ammo rubbish here. The games graphics are superb for example while fitting out your Lynx, you are treated to a three-D perspective rotating wire-frame view of the chopper.

The instrument panel is equally impressive, sporting a weapon status and selection system, navigation console, fuel guage, engine instruments and altimeter. But the most mind-blowing thing of all is the cockpit view which shows, in real-time and full colour, the actual view as you fly over the terrain. Hills and valleys rise and fall (their shape is accented by contour lines, a bit of poetic licence that actually adds to the realism), trees and houses appear as dots in the distance and stream past you out of sight, enemy planes flash across the field of view and over the horizon. I take my hat off to the programmer this is a work of genius.

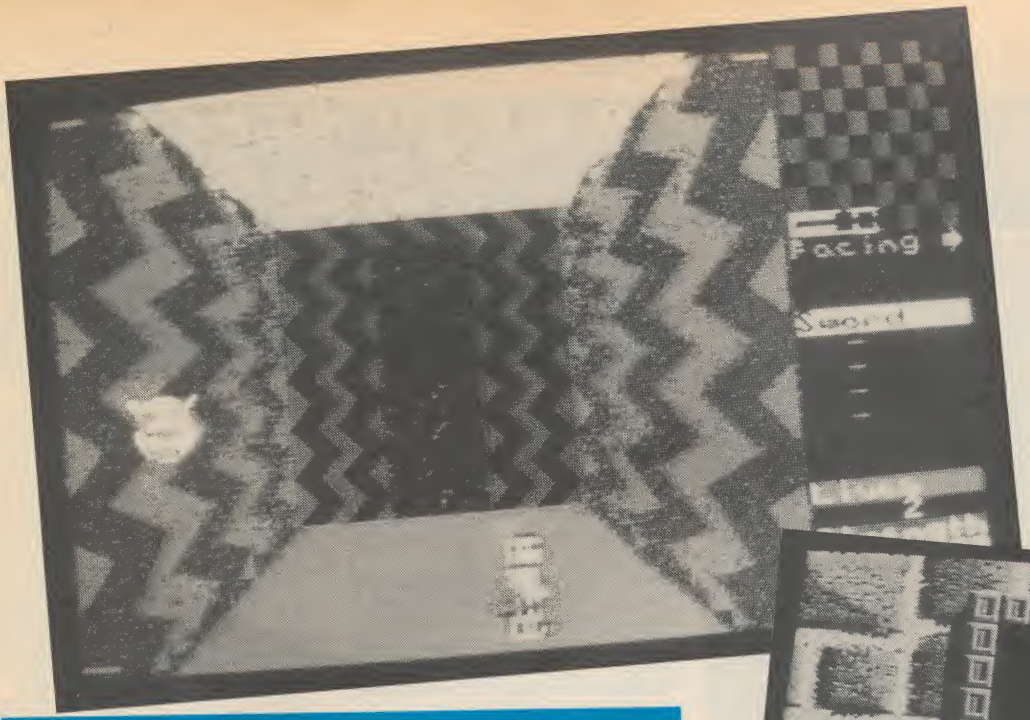
Sound isn't neglected, as there is the steady background beat of the rotor blades with a pitch depending on your flight speed, and explosions where necessary.

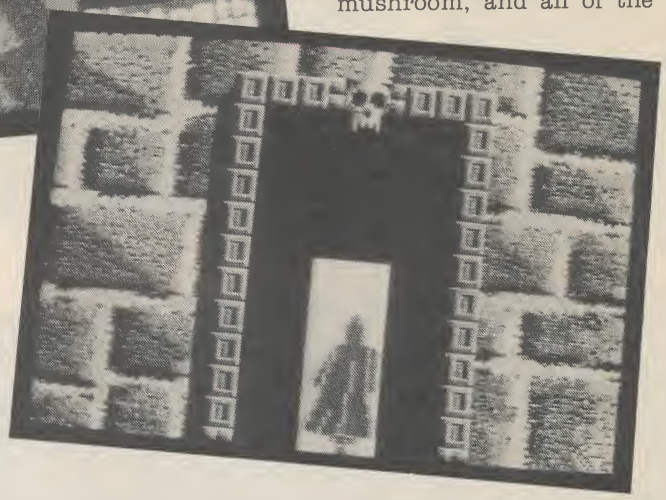
It's going to take you hours to master this game, just learning what the couple of dozen key options are takes some doing. You can use just the keyboard, keyboard and one joystick or keyboard and two joysticks, depending on how you prefer to control a game. If you want a game which presents a satisfying and difficult challenge that will take perseverence to master, put down the magazine this instant, and go buy Combat Lynx. You won't regret it.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Nova





Title:	**Gates of Dawn**
Computer:	**CBM 64**
Supplier:	**Virgin**
Price:	**£8.95**

Where am I? What am I doing? Is this is a dream?

Such were the thoughts which went through my head when playing this game from Virgin. The game is based on the nightmare world of sleep and you dream that you are a knight in armour wandering through an ancient world fraught with dangers.

As you progress from room to room, your progress is mapped out on a chessboard to the right of the graphic action screen and the aim is to reach the gates of Dawn or, in the words of the song, to help me make it through the night.

Weird and wonderful challenges await the dreamer with spiders and bats featuring strongly in the action. Occasionally a room contains an object or two which may be useful later on and these may be carried until required or dropped if you later decide they are useless. As usual in adventures you are limited in the number of objects which may be carried and in this game that means only five.

The instructions are sufficiently detailed to allow you to commence the game, but no clues are given to the method of play so trial and error is the watchword.

Graphically, the game is sophisticated one moment and blocky the next and like most 3D screens it is difficult to judge depth and relative positioning. This means that death occurs frequently through miscalculation and a lot of chance is involved in success.

As I played the game I found that total confusion gradually gave way to a vague sense of purpose. I also felt my reaction towards the program change from one of dislike to that of curiosity. Perhaps persistance might lead further to addiction. I must admit that this is the first action adventure which has given me the usual initial feeling of despair which I experience with text-based adventures.

If an object is selected for use, the computer may ask how it is to be used. For example, having collected a mushroom I gave the command 'eat' and for several screens every object took on the appearance of a mushroom, and all of the listed objects which I was carrying changed to read mushroom. I've yet to find if the mushroom has a real function other than as halucigenic relief. Weird.

J.G.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Red Giant

Title:	**Operation Swordfish**
Computer:	**CBM 64**
Supplier:	**British Software**
Price:	**£ 7.95**

The fairey Swordfish was used for aerial search and destroy missions against submarines during the Second World War. This game invites you to take the role of a German submarine commander given the task of delaying the allied landings in the Mediterranean under the relentless attacks of the marauding Swordfishes. Nothing is wrong with the games concept but its realisation is a different kettle of Swordfishes.

The only controls you have are the function keys for dive, surface, open and close hatch, with the joystick being used for targetting torpedoes, moving the anti-aircraft gun and firing these weapons.

The screen shows a view across a bay and the convoy ships move across your line of sight with the planes flying towards you Beach-Head style. To stave off this bombardment you must shoot down the 'planes and torpedo the ships without sustaining too much damage yourself. Therein lies the problem. The gun can only be launched underwater. The result is that you have to decide which is the greater threat, the reality is that you get shot to pieces.

I found the game frustrating to play, the torpedoes leave no trace of thier progress and the fun is difficult to aim correctly. Also the amount of damage which the submarine can sustain is set to such a low tolerance that the game no sooner starts than it ends.

Despite the similarities to one of the Beach-Head screens, this game adds just enough to make it acceptable as a game in its own right. it is limited in its scope and frustrating to play. In my case frustration has given way to indifference.

JG

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Black Hole

"R"E"V"I"E"W"S"

Title: On-Court Tennis
Computer: CBM 64
Supplier: Activision
Price: £10.99

With Wimbledon in mind, Activision have released their 3D simulation which enables you to join in the on-court excitement.

Streets ahead of Psion's abysmal Match Point, this package shows how it should have been. You choose your style by selecting one of the four players which each have their own strengths and weaknesses. You must also shoose the playing surface; grass, hard court or clay.

Once the type of game has been selected, the screen reveals a view of the court looking along the line of play, with player 2 in the near court sporting a yellow shirt and player 1 in the far court in blue. In the one player version the computer takes the role of player 1.

The first problem is serving the ball. The computer sees to the process of throwing the ball in the air but it's up to the player to time his swing and calculate the strength and direction of the serve using the joystick and the fire button.

Assuming the serve is legal, the computer again takes over to position the player for the return shot. Again the joystick selects the type of shot, giving the choice of slice, lob, drop, topspin or flat shot, the timing of the swing determining the direction of the ball. If your opponent lobs the ball back you then have the opportunity to place a smash into his court.

Scoring follows the sequence of the professional game including the use of tiebreakers to decide drawn sets. The match can consist of three or five sets, or it can just be a one set practice match.

From the players point of view the play is by no means easy and practice is essential, just as in the real game. As your game improves so does that of the computer making an almost unbeatable opponent.

If you've ever wondered what its like to face John McEnroe, Jimmy Connors or Bjorn Borg then this game is definitely for you.

J.G.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Red Giant

Title: Arnhem
Computer: Spectrum
Supplier: CCS
Price: £8.95

In 1944 three Allied airbourne units were dropped into Holland to secure vital bridges and therefore clear the way for the Allied advance. This wargame simulates five different scenarios in this campaign.

The game can be played by up to three players. In the one player game, the player controls the allies against a computer opponent and in the three player game, separate players play the British and American units that make up the Allied force.

The battles are fought on a map far bigger than the computers scrolling screen therefore the enclosed full map is useful for planning tactics.

The scenarios range from the shortest which depicts just the advance to Eindhoven to the full Market Garden scenario which takes about ten hours to complete.

Each of the scenarios consists of a number of turns during which a player can advance his units or perhaps order them to dig into defensive positions.

Arnhem is a well designed wargame and as most of the Allied forces are airbourne and therefore can land anywhere, each game will be different.

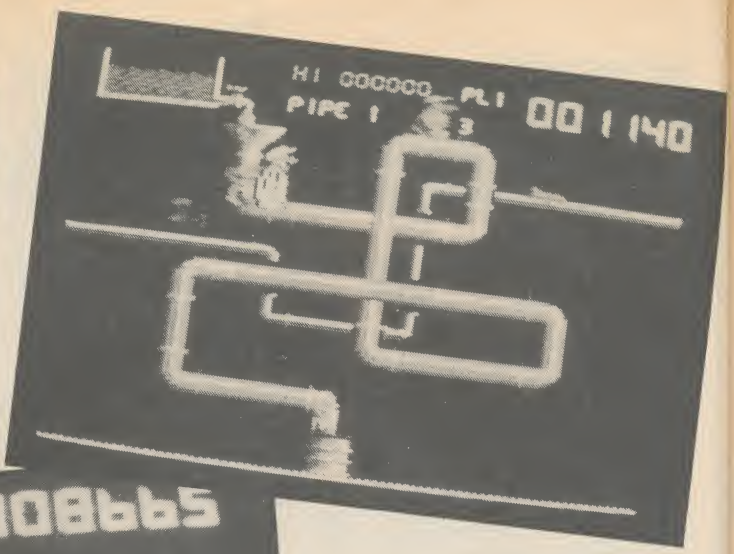
T.H.

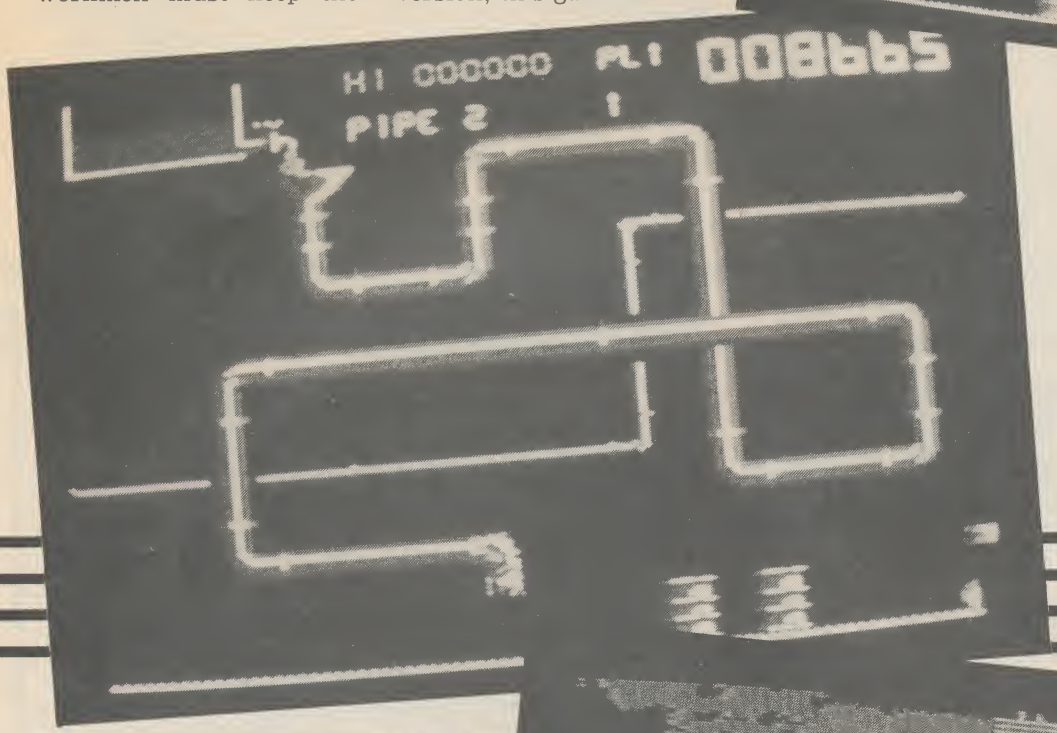
PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Bright Star

Title:	**Super Pipeline II**
Computer:	**CBM 64**
Supplier:	**Taskset**
Price:	**£8.90**

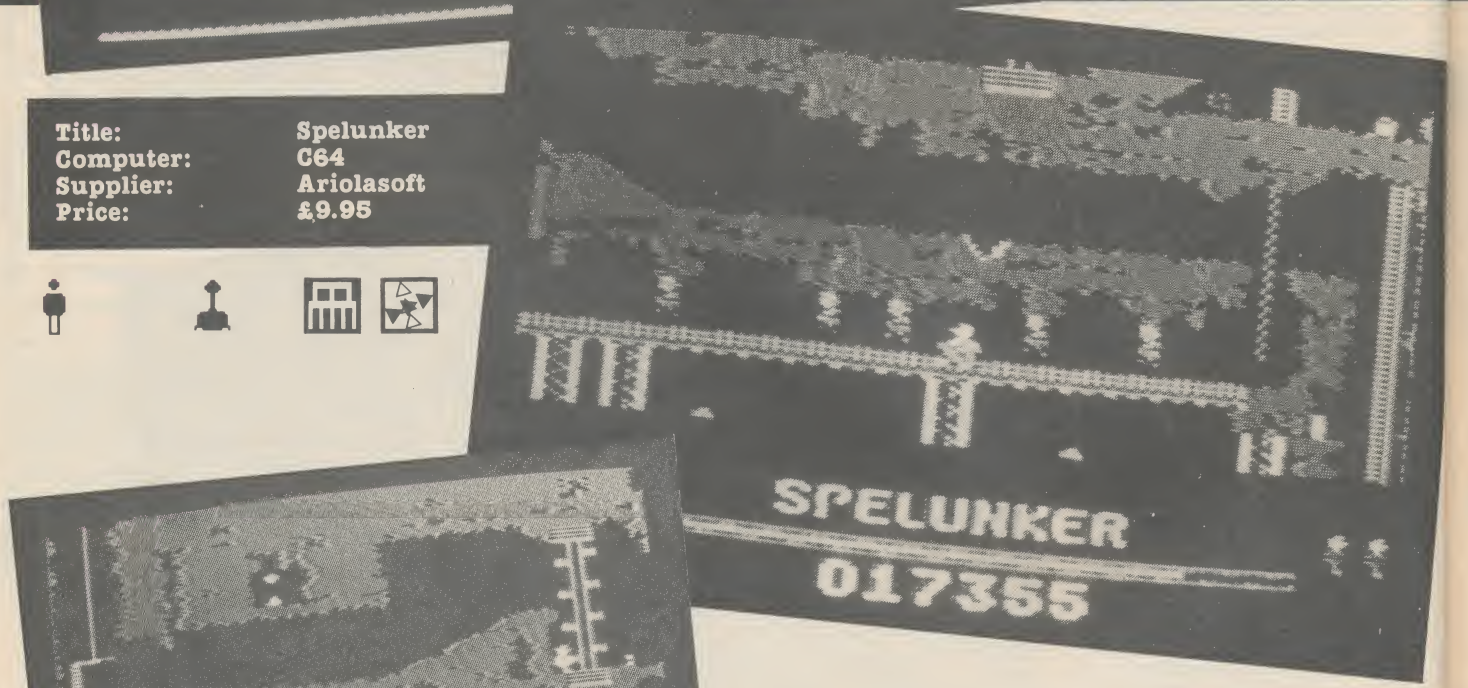




If, like me, you enjoyed Super Pipeline, then this sequel will not disappoint you. Once again Foreman Fred and his band of eager workmen must keep the water flowing through the convoluted pipes to fill the water barrels at the bottom of the screen, fending off the attempts to sabotage this aim are rogue tools and hostile insects.

Despite the graphics being identical to the earlier version, this game is much more challenging having more frequent attackers and an increased workforce of two cute little workers (could this be the start of Maggie's industrial recovery?). The variety of foes has also been increased, with the familiar six-legged Venusian Pipe Spider and Hard-case Lobster being complimented by caterpillars, drills and hammers. Fred

Title:	**Spelunker**
Computer:	**C64**
Supplier:	**Ariolasoft**
Price:	**£9.95**



Despite having to make continual disk accesses this is a highly excellent game. The depth of detail and imagary of the playing areas is wonderful. The problems that need to be solved are also very good.

But first let me fill you in on the game. You are going down a mine that has claimed many other miners after the usual treasures that anybody would find down a mineshaft. On your way the ghosts of previous miners try to attack you (however you have an anti-ghost gun to fend them off), bats drop things on you,

can blast any of these enemies with his gun but an occasional shower of tacks is unstoppable and a worker may have to be sacrificed to protect Fred. Ignoring the sociological implications of the expendability of menials in a consumer society, I shall concentrate on the gameplay.

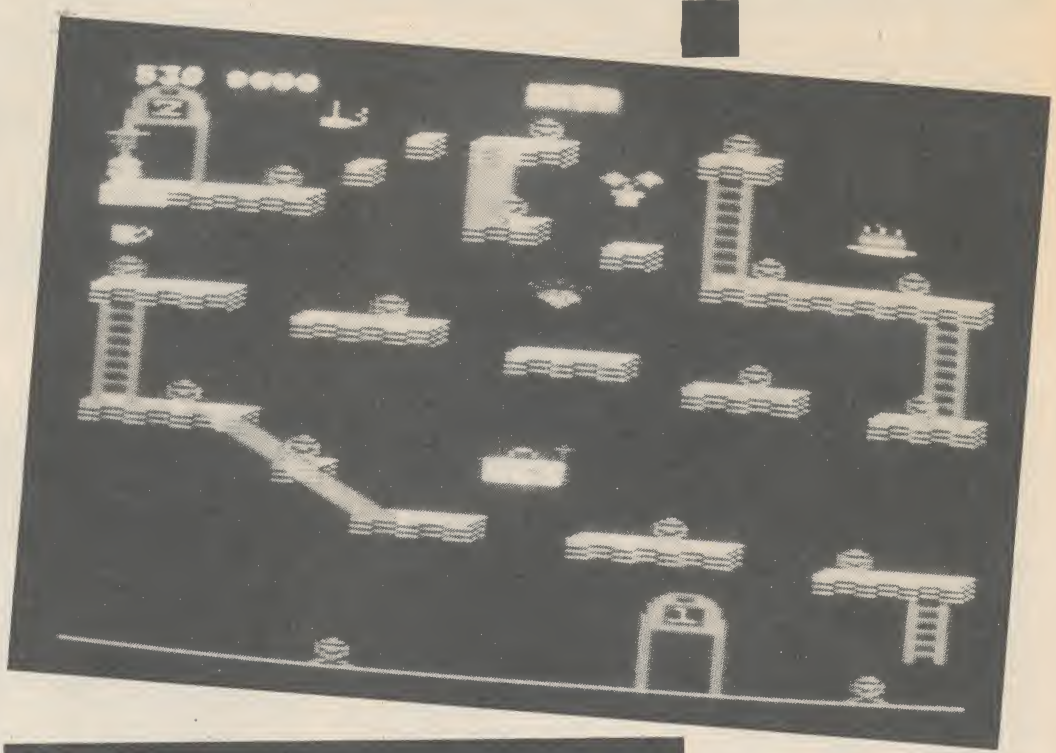
Touching any of the insects or tools is fatal to Fred and his workforce but the real problem is caused by the breaks are made in the pipeline which allow the water to drain away. The water supply is limited, so Fred must collect one of his workers and lead him to the break as soon as possible so that repairs can begin. Whilst the little worker hammers away, Fred must protect him against the many dangers until the leak is repaired.

Taskset's cartoon-like graphics are delightful and the game is fast and challenging. **J.G.**

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Nova



Title:	**Bounty Bob Strikes Back**
Computer:	**CBM 64**
Supplier:	**US Gold**
Price:	**£9.95**

The return of Bounty Bob from Miner 2049er has been well worth waiting for unless your name is Yulon Uohan, Bob's arch-enemy. Again we join Bob down a mine full of manic mutants intent on murder in this platform game.

Each of the twenty-five screens must be solved if Yohan is to be defeated and with the mine alive with mutant beasts and rogue machinery it is not easy.

The mutants evolved from small furry animals when radioactive waste from Yohan's dump seeped down into the mine, contaminating their food. In some of the caverns this waste still drips dangerously from the stalagtites adding to Bob's nightmare journey. One touch from a creature or a drop of this acid rain costs our friend a life but if he collects one of the many items left by the mine's previous occupant, Bob becomes temporarily lethal to the creatures anbd one touch from him will give them terminal relief. The mutants know this and assume less hideous appearances whilst Bob is in his supercharged state.

Completion of a screen means that you have guided Bob over every inch of ground. As he moves on a new area it becomes a solid block of colour and lifts, suction tubes and matter transporters are there to assist you.

A sufficiently high score allows you to enter your name on the high score board which is an entertainment in itself. Two bulldozers are used to select the letters of your name which are pushed onto a conveyor belt. From here they are picked up by intelligent pigeons which swoop around the board moving until the board is correctly reorganised. Any names which are pushed off the board are deposited underneath the board where the two bulldozers crush them into a solid block which is unceremoniously kicked into touch.

Function keys may be used to select display screens and the left arrow key permits you to pause the game so that a route can be planned through each new cavern.

Great skill and fast reactions are the order of the day if you are to get through every ordeal before your air runs out and I hope US gold have more than just a miner success with this program.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Red Giant

volcanic things spit at you, and the entire terrain seems to be after your blood.

On the way you must collect dynamite, flares, and energy, as well as the elusive treasures you have to find. Flares are used to scare off the bats, and blockages can be cleared by the bombs.

The game is broadly ladders and ramps from the original miner 2049er, and its clone manic miner, mould with a lot of differences. The game is not screen based, you don't have to complete one screen before going onto the next in fact you can almost come and go as you please.

All in all, this is one of the best ladders and ramps game that I have seen. **M.R.**

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Bright Star

Title:	**Grog's Revenge**
Computer:	**CBM 64**
Supplier:	**US Gold**
Price:	**£9.95**

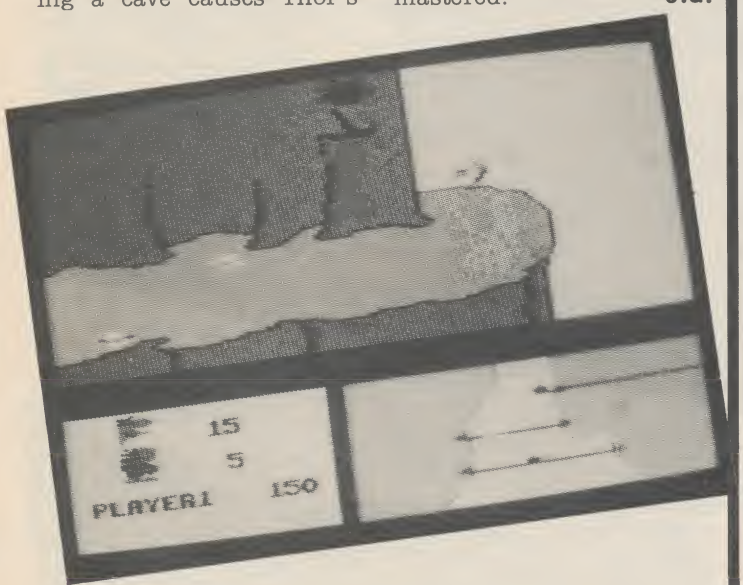
Grog's Revenge is the second game based on the BC cartoons and follows hard on the wheels of Quest for Tires. Once again our intrepid hero, Thor, is wandering around his prehistoric world on his stone-wheeled monocycle but this time he has forsaken the neolithic plains for treacherous mountain tracks.

The game is a race to collect sufficient points so that Thor can pay a toll allowing him across a rope bridge leading to the next, more challenging level. Points are gained by rolling over coloured clams strewn along the narrow winding mountain path. The path is also covered with cracks and rocks which will smash the monocycle and, as the levels increase, these obstacles increase.

Along the cliff walls beside the path the occasional cave is found. Entering a cave causes Thor's light to go on and the view is limited to its 'V' shaped beam. Strange little creatures scurry about amongst the stalegmites in the dark and Thor must mow these down, avoiding the rock formations, to score more points. At the end of one of these tunnels the toll booth is found and when enough points have been gained the game proceeds to the next level. If there are any points left over after the toll has been payed a new wheel may be acquired which means an extra life for Thor.

Where does Grog come into all this? He is rolling along the same mountain path collecting points of his own and Thor must avoid meeting him or sacrifice all his lives if he does.

The steering of the monocycle requires deft joystick control and each new level demands greater steering ability. The graphics are cartoon quality and the game, though limited in variation, is enjoyable but can be very frustrating initially until control of the monocycle is mastered. **J.G.**



56

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Bright Star

Title:	**Squash**
Computer:	**C64, Spectrum**
Supplier:	**New Generation**
Price:	**£7.95**

Jonah Barrington's Squash (to give it its full title) is a superb simulation of a frantic sport which features animated players and even speech.

The game accurately represents the game of squash and is played to the International Squash Federation's rules which are included on the cassette inlay. The players are moved around the court by either defined keyboard keys or a joystick. I found that using the joytick was a distinct advantage as you are more free to think about your shot than which key you should press.

In the Commodore version the two players are distinguished by their shirt colour one of which is white the other yellow. White always starts the game by serving so I would suggest you take account of this slight advantage particularly when playing the computer opponent (as you will need all the help that you can get).

The Spectrum version sacrifices the colour for a

Title:	**Superstar Challenge**
Computer:	**C64, Spectrum, BBC**
Supplier:	**Martech**
Price:	**£7.95**

Joysticks everywhere are in for another pounding as another decathlon style game is launched. This time the hero to be challenged is Brian Jacks and competition is played over eight events.

These include, canoeing, cycling, sprinting and swimming where speed is important. However the game features a system called powersync where the best acceleration is acheived by a steady build up of pace leaving the frantic joystick wagglers on the starting line. Swimming also poses the additional problem of breathing at the right time or valuable seconds will be lost.

In the football event you have to co-ordinate speed with control as you have to dribble round three cones before shooting.

The pace slackens for the other three events.

playable black and white display with the players distinguishable by a white band on one players shirt.

The tactics and feel of the game are the same in both versions. Practice will show you how to serve into a corner or play your opponent into difficulty. However you should avoid obstructing your opponent as a penalty will be called and a scoring chance may be lost. These calls are the score announced by a synthesized version of Barrington's voice which is impressive on the 64 but barely audible on the Spectrum.

Matches can be played at a number of speeds depicted by the colour of the ball ranging from the possible (red) to the impossible (yellow) over 1, 3 or 5 games.

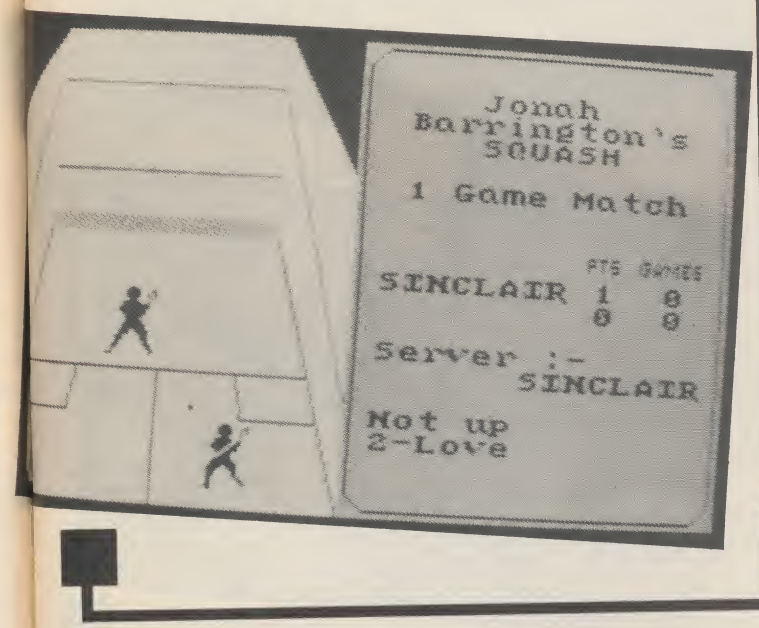
This excellent simulation should be enjoyed by gamers and squash enthusiasts alike.

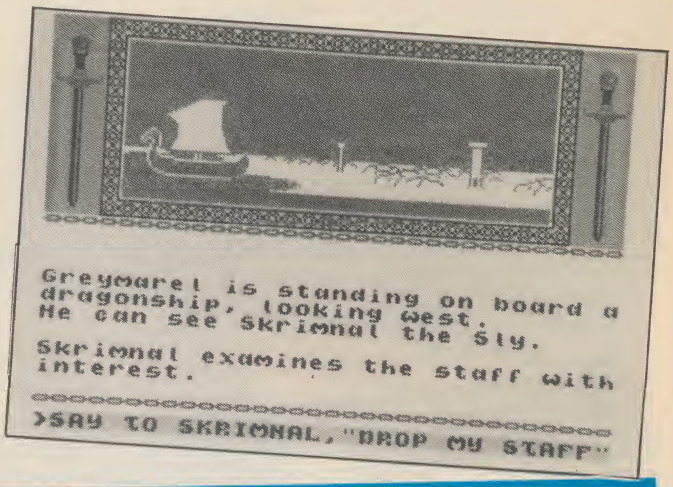
T.H.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Nova





Title: Runestone
Computer: Spectrum
Supplier: Games Workshop
Price: £7.95

Runestone maintains the high quality that we have come to expect from Games workshop. It is a new type of game and is a combination of a Midnight style landscaping game and a text adventure.

The result is an enjoyable game with over 8000 views of 2000 locations filled with humans, elves, orcs and the evil Kordomir. The land in which the game is set is known as Belorn and has the usual stock of mountains, forests and icy wastes.

You control three characters as they try and complete a number of quests cumilating in the destruction of Kordomir and his Orcs. Your characters are Morval the Warrior, Eliador the Elf and a Wizard called Greymarel.

The game also contains an extensive parser which understands complex text input and also allows you to issue several commands at once. This you should make good use of, if you are to survive and complete your quest.

To add to your problems the game is played in real time which gives you little time to plan your moves, especially when you have three charactrers to control at once. This problem is confounded by the fact that while you are taking Morval for a country stroll the other characters may be under attack, imprisoned or dead.

Runestone is a state of the art adventure which combines the graphics of a landscaping game with the depth of a text adventure.

T.H.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Red Giant

However this is misleading as I found then the hardest to do. In the boar shoot you have to fire five crossbow bolts at moving targets attached to bulls. The squat thrusts poses an interesting co-ordination problem as it is extremely difficult to establish the rhythm you will need to ensure a good score. This is because each squat thrust requires three taps on the joystick in one direction but only two in the other. By far the hardest event is the arm dips where one mistake will end the event for you with a poor score. This will be disastrous and will end your challenge.

I found the game more difficult to play than other decathlon style games as there are new techniques to learn and I would imagine that it will take most people some months to beat the computer opponent. Unfortunately you have to do this before you even get a chance to take on Brian Jacks!

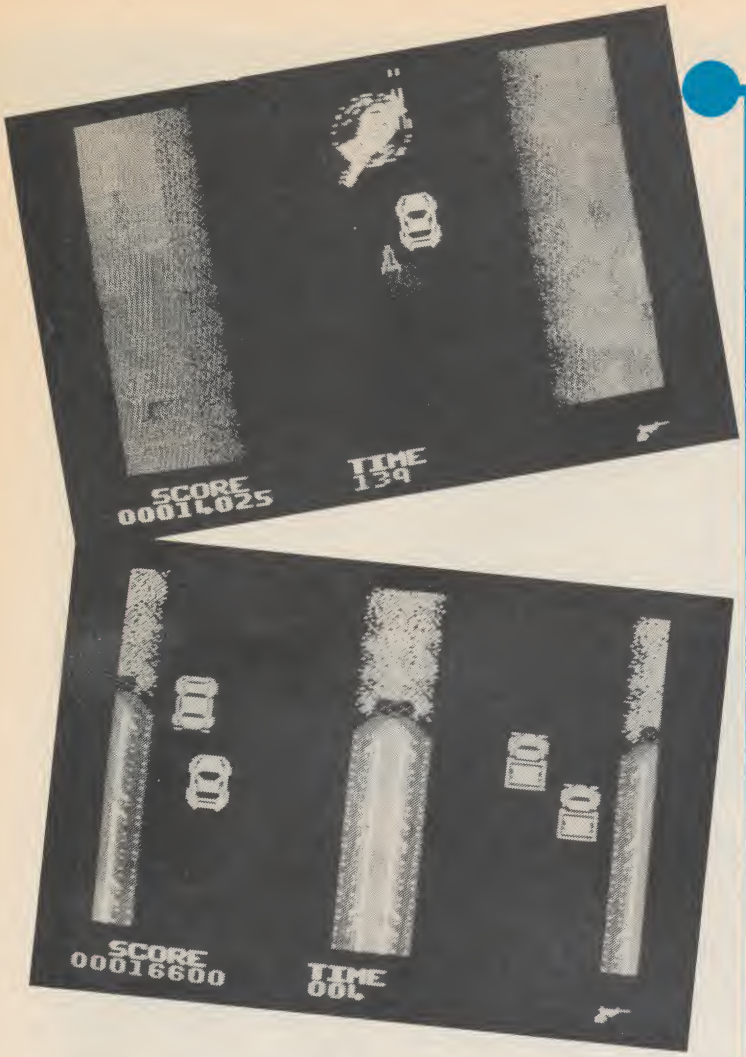
The boar shoot is replaced by archery in the Spectrum and BBC versions which is a shame as it is my best event.

T.H.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Bright Star



Title:	**Spy Hunter**
Computer:	**Spectrum 48K**
Supplier:	**Sega**
Price:	**7.95**

This is a race chase type of game where you assume the role of a James Bond like character equipped with a fast deadly car. Its deadly in that it can fire bullets and has the ability to fire ground to air missiles. The car is dropped by a transporter and the game then begins in ernest. The main idea is to destroy you. The baddies cars are easy to spot becuase they are black of course. Every so often a supply tanker will road past you and the idea is to dock with it for fuel/bullets and sometimes a few ground to air missiles. The ground-to air come in useful because the baddies have a helicopter that they use. Without the missiles things become slightly difficult.

Once you have completed a lap of the track a sign appears telling you that the bridge ahead is not in use, you must then guide your car down a tunnel that is to the left of the bridge. Failure to do so means that the car goes for a swim!

If you manage this then the game changes to a boat chase with all the usual bombs and mines.

This is a very high quality game that I highly recommend.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
BRIGHT STAR

58

Title:	**Spitfire 40**
Computer:	**C64**
Supplier:	**Mirrorsoft**
Price:	**£ 7.95**

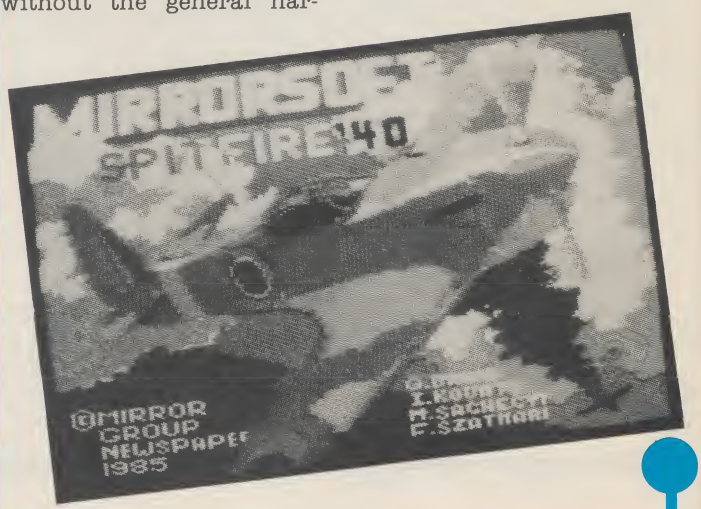
Spitfire 40 — as you may suppose — is a simulator of the Supermarine Spitfire in the war-torn years of 1940. The plan is for you to rise through the ranks to Group Captain and to obtain the coveted medals of the VC, DSO and DFC.

The first thing that the program does is to enquire whether you want to use a saved or original log. You can save your progress through this game a very useful thing too if you are going to play it for any great length of time. There are three modes of operation for a flight. Practice, combat, and combat practice.

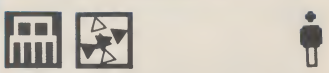
Practice mode lets you learn the controls, handling, and general performance of your craft without the general harrassment of enemy aeroplanes. Your performance at this can be saved for experience points.

Combat practice is a mode where you find yourself in the midst of a battle and can practice dogfighting without the bother of landing and taking off etc. Your successes in this mode are not recorded. To do that you must fly in proper combat.

Combat mode is the heart of the program. To save any status here you must take off, fly and fight, and land before saving. To start with certain conditions and statuses will be displayed. This gives information such as the enemy's strength and position. Flying the plane itself is similar to any other fight simulator, so I will skip that bit and concentrate on



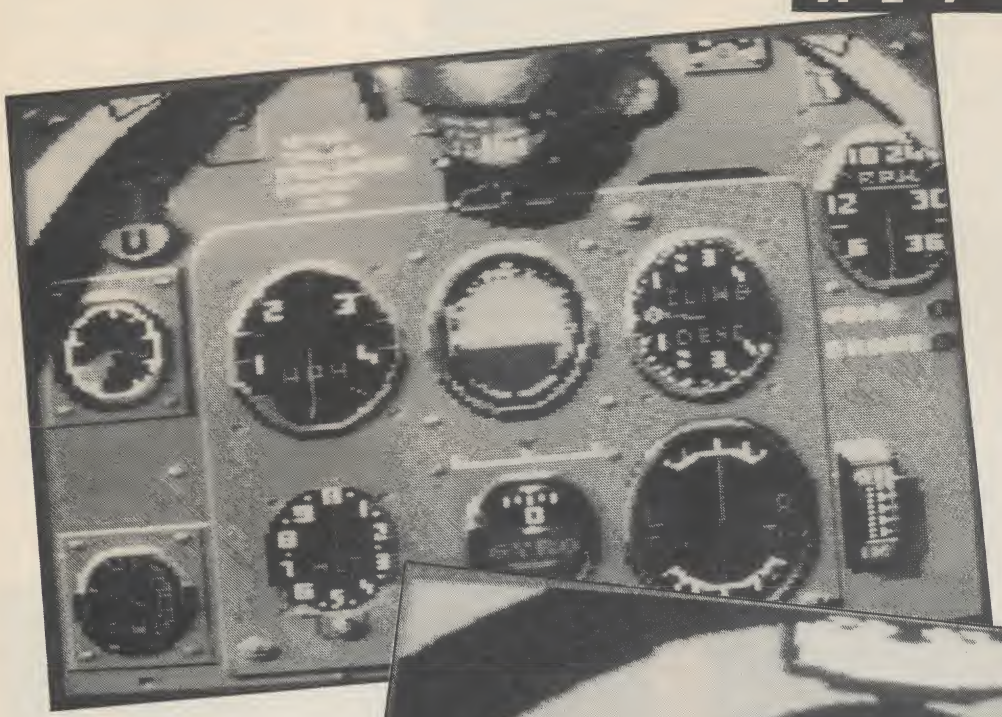
Title:	**Wizadore**
Computer:	**BBC B**
Supplier:	**Imagine (Play the Game)**
Price:	**£7.95**

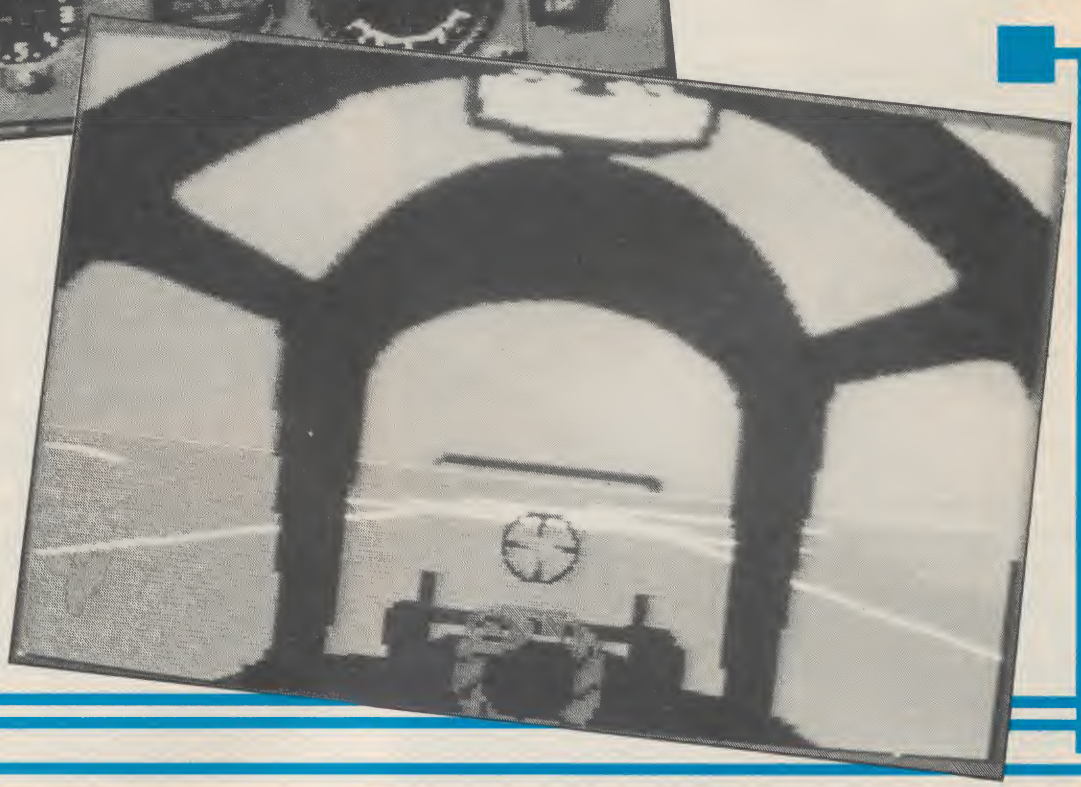


Wizadore, marks Imagine's second release for the BBC Micro since their recent revival, and it is good to see that they are back in form again with an excellent game, colourful graphics and pleasing sound effects.

Wizadore is one of those arcade adventures that are becoming more popular as time goes on.

Typically, you are in control of a character who is gifted with limited magical powers, as his only real strength is from reading magic scrolls. With them, you are able to destroy your opponents, who are either firing arrows at you, or they are marching up and down on guard duty. Your task is to walk around a world of forests nd dungeons and dragons . . . not to mention





the excellent graphical display.

The graphics are based on two screens — the control panel and the forward view. The forward view is a 3D representation of whatever you should see in front of you. This is quite good apart from the sluggishness of some of the horizon drawing. The second screen is of the instrument panel. This is covered in copious dials and indicators and is much less cluttered than most of these simulators that try to put the external display on the same screen as the instruments.

The combat, which is the best part of the game is explained clearly and consisely in the manual. Enemy aircraft appear in different colours that indicate different skills and speeds. Get 'em in your sights and blam! remember though that this is more than just a shooting game, it is a full simulation. Gripping stuff!

M.R.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Red Giant

Robin Hoods everywhere firing arrows at you: Unless you have a magic spell on you, it would be best to jump over the arrows, before they hit you, and, of course, kill you.

You are reincarnated four times in all, starting at whatever screen you died at, which is good news if you jumped 10 bottomless pits, 6 arrows, and skillfully avoided the armed guards, only to be hit by a sword dropped from above, by soldiers sitting astride creatures that look more like green Parrots than Griffins.

The graphics are excellent, being colourful and smooth, the scrolling is not as smooth as Castle Quest, a game to which Wizadore bears a great resemblance (ducking, running and picking up things in a similar environment), but as a whole, it is well implemented. There are treasures along the way which can be collected and used, and some are purely for show.

My only real criticism is that Wizadore, at early levels of the game, is far too dificult. Jumping over the arrows requires precision timing, and only the slightest miscalculation can make you fall into the bottomless pit, thankfully, the game did not get too difficult froim there on, so if like me you feel like giving up on the first level, do what I did and come back to the game a week later, it does wonders.

As a whole Wizadore is a well implemented version of a popular game scenario, it uses the BBC's graphics capabilities well, and is complemented by good (if repetitive) music. There is no option for a joystick and there is a single high score number. The characters fit in reasonably well (although I'm not too sure about those parrots!), and Imagine's choice of keys are comfortable. Wizadore is a well paced game, certainly, timing is far more critical in Wizadore, than many games available and should be action packed for just about anyone.

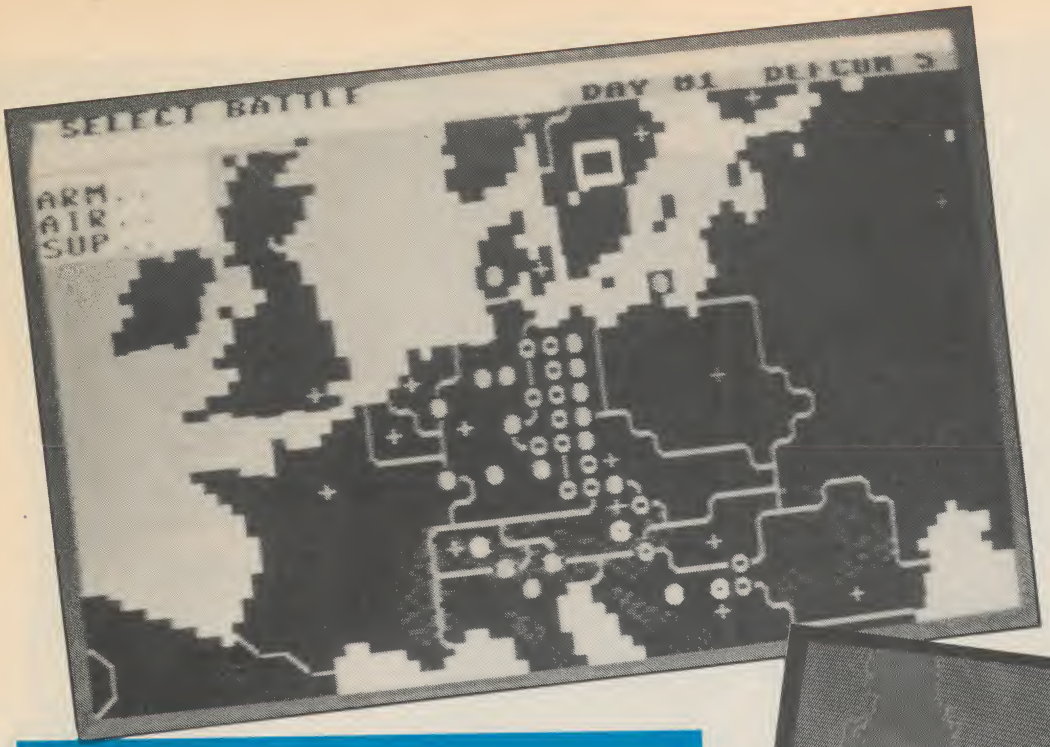
Recommended, if you like 'Arcade Adventures.'

CG

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Red Giant



Title:	**Theatre Europe**
Computer:	**Commodore 64**
Supplier:	**PSS**
Price:	**£9.95**

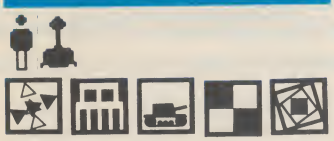
Theatre Europe simulates the first 30 days of the next war as the forces of Nato and the Warsaw pact battle for control of West Germany. The Warsaw pact will win if they smash the Nato forces by taking West Germany, Nato by stopping this and therefore halting their advance. As the supreme commander of either side you control an impressive force of conventional forces as well as chemical and nuclear weapons.

Theatre Europe is played in game-turns in which you move your forces (via joystick controlled cursor) and attack adjacent enemy. Whenever possible you should attack enemy units with at least three of your own.

Each unit has a specific combat or ARM strength which is reduced by combat. When this reaches 0 the unit is lost. Units also need supply (SUP) and AIR cover. These will also be depleted but along with ARM strengths, can be reinforced at the end of most turns.

Each turn you will also be given an opportunity to flex your fire button finger on the games action screens. These are used to simulate one of the battles fought that turn. Using your joystick you must fire and guide missiles to

Title:	**Elite 64**
Computer:	**C64**
Supplier:	**Firebird**
Price:	**£15.00**



At last! the program that jealous C64 owners have been looking for. Ever since Elite turned up on the BBC micro about nine months ago every computer owner has been lusting after it.

I'm sure that everybody has heard of the BBC version and knows it to a certain degree so I will concentrate on the additions to the Commodore implementation. There are three Acorn implementations at present BBC disk, BBC tape, and Electron tape. The disk version is the most complete and the tape versions have certain bits removed in the case of the Electron quite a large amount. The BBC has half the memory of the Commodore 64 and needs to make a lot of disk accesses to make up for it.

The Commodore 64 can accommodate Elite in its entirety, and then some more. So no extra disk use in necessary with the Commodore disk unit that is probably just as well!; The main difference in the controls is that it doesn't use proportionate joysticks and the way the keys are laid out is a bit different. One extra function turns off the planetary lines for extra speed. On speed for a moment most people's worst expectations were not realised, as this version is not as slow as I feared.

The screen display is similar to the BBC original, there are more colours of course and there is a different sight for each type of gun — ie. military lasers have a different sight to the original pulse lasers.

Music and sound effects abound, different sounds for different lasers, and docking music like in 2001 a Space Odyssey. Trumblies are another problem altogether.

Trumbles are modelled on Tribbles from Star Trek. To the uninitiated a Tribble is a little furry and loveable creature that multiplies like crazy, until they eventually take over your ship.

Trumbles are the same, once you get one in your hold you end up with thousands after they breed, and breed, and breed. You pick up one by buying it! for 5000cr no less. Getting rid of them is harder and Firebird aren't telling anybody. Even ejecting doesn't get rid of them entirely.

As they fill up your hold you cannot carry as much cargo because they take up so much room. After they fill up the hold they move onto filling up your cabin, and eventually start covering up the screen thus reducing your available view. Ever tried fighting with a trumble annoying you on the screen?

There are no words to express how amazing this game is despite the hype. The Commodore version is a great improvement over the BBC version. Get it now!

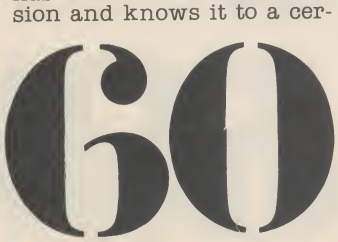
NB. Having had a quick peak at the Spectrum version (due out in a few months) I am not so impressed. The Spectrum just cannot handle this type of game. There may be more missions, but the hardware cannot cope. Go get a C64 instead.

M.R.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Nova



destroy enemy tanks and planes. Your performance in assisting this attack will effect all of the other battles one way or other. Therefore if your not a joystick genius you should ignore this phase or you will give yourself a handicap you could well do without.

As well as controlling his land forces a player can command air missions and launch chemical and nuclear strikes. You have only a limited number of planes in your airforce and so should allocate them carefully to the various missions at your disposal. These include reconnissance to determine the strength of enemy units, counter air to weaken the enemy airforce and interdiction attacks to delay and destroy enemy reinforcements. In addition there is the continuing battle of air superiority which will effect the success of other missions. You can also use your aircraft in assault breaker attacks on enemy units to support your ground troops.

The enemies supply and reinforcements can be affected by a strategic chemical strike which will destroy an important enemy supply city. Nuclear weapons may also be used in this manner or against individual units. Obviously there is a risk of a response from the enemy in using these weapons which is likely to result in the destruction of the world in which case no one would win.

In the top right hand corner of the screen is the defcom display which begins the game set at 5. Every time a warhead is launched the figure is reduced. When this reaches one, the enemy will launch an all out nuclear attack with predictable results.

Your computer opponent will employ a number of strategies depending on the game level you have selected. At level one it will avoid nuclear weapons unless provoked. Level two follows accepted Nato or Warsaw pact strategies and level three may launch an all out attack at any time.

At the end of the game you will be awarded a command rating which indicates your success. My first few attempts resulted in the end of the world and a 0% rating. Twelve hours of continuous play later and I was able to win as either side with a rating of over 80%.

One final gripe is that the choice of colours for the units, a predictable red or blue, means that the game is almost impossible to play on a black and white TV.

Amstrad, Atari and MSX versions will be available soon.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Red Giant

Title: Master of the Lamps
Computer: CBM 64
Supplier: Activision
Price: £10.99

Activision threatened the world with a new series of programs which would explode like an expensive firework illuminating the dusky sky of the software market. If this is the example then it's going to be more like a damp squib.

There is great similarity between this and Simon, the mimic the tune game much beloved by program contributors of magazine listings.

Colourful it is, exiting it is not. Basically, you must travel through a corridor in space on your magic carpet. At the end of the corridor is the Genie's room which has an array of gongs. Three beats on the gong will summon the Genie who blows smoke rings of pure music. As the smoke disperses a range of notes is played which you must repeat exactly as heard. If you do not play fast enough, a musical note gradully descends and throws you back along the passageway.

Your lives are unlimited and so is the boredom of having to renegotiate the passages to have more musical smoke blown in your face. I must admit though that the graphic effects of the passages are very well donw, it's just a pity that the rest of the game is one long technicolour yawn.

J.G.

PLANET RATINGS

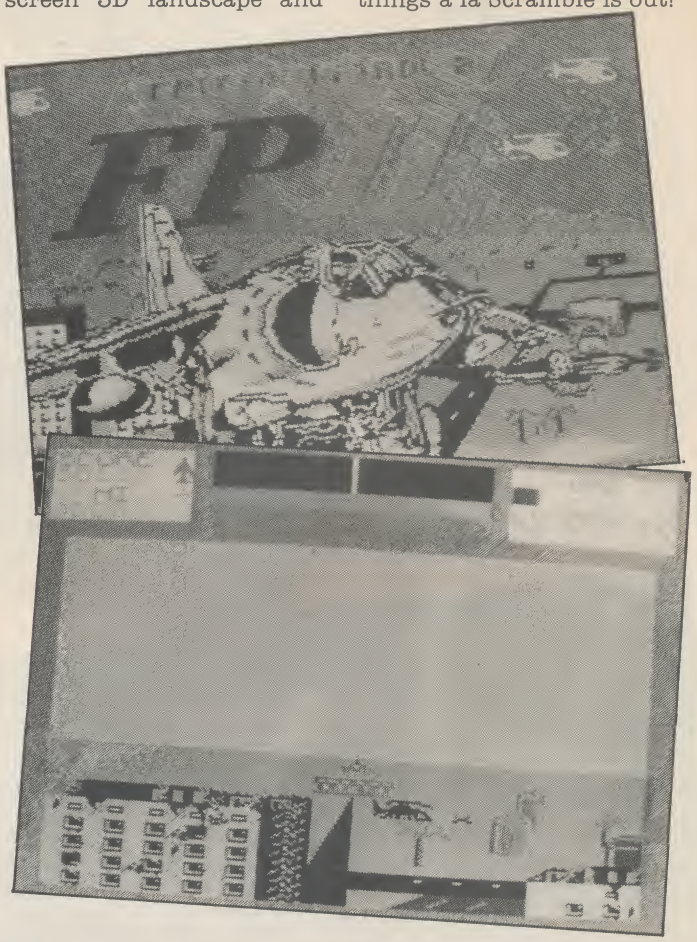
Originality
Graphics
Use of machine
Value for money

STAR RATING
Eecaans
Black Hole

"R"E"V"I"E"W"S"

Title: Falcon Patrol 2
Computer: Spectrum 48K
Supplier: Virgin
Price: £7.95

Falcon Patrol is rather like a cross between Zaxxon, Scramble and Defender. So like Defender the top of the screen is dedicated to a radar scanner that warns what is up ahead. Like Zaxxon there is a scrolling screen 3D landscape and



like Scramble there are things on the ground to hit. You are supplied with 100 missiles and as you cross the landscape 3 different types of helicopter attack you. Fast and maneouverable solo fighters, bigger gunships and the transporters that drop nasty things like Flack Bombs and Radar Jammers.

The graphics are good but really they're only decoration because the ship only moves in 2D. Never the less they are very smooth and as fast as is necessary. Once the controls have been mastered the game becomes quite frantic and it is at this stage that it becomes enjoyable. I said once you have mastered the controls and this is no mean feat because the controls don't self cancel, that is to say of you press to go down the ship keeps going down until you tell it to go up, thus altitude is very difficult and crusing along happily bombing things à la Scramble is out!

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Bright Star

Title:	**Ghostbusters**
Computer:	**Amstrad CPC464**
Supplier:	**Activision**
Price:	**£ 10.99**

This is the game of the book of the T-shirt of the pop video of the film. The plot is that the Ghostbusters team has become so successful, they are offering franchises, and you have taken one up. Starting with a bank loan of £10,000, you have to purchase the equipment you think you need to run the franchise successfully. The object is to make sufficient profit during the main sequence to qualify for the short end game in which you tackle the evil god Gozer at his headquarters, the Temple of Zuul.

Equipment selection is made by menu, and can only be done at the start of the game, so choose carefully! You'll discover the optimum of vehicle and equipment by trial and error. For instance, there's a choice of four cars ranging from a clapped out VW which is cheap, but slow and not very spacious, through an old hearse and a station wagon to a fast sports vehicle (the latter actually carries fewer items than the previous two).

Once you've picked your car, fit it out. Here there's a trade-off between the money you've left yourself, the prices of the various items and the load your vehicle can carry: one of the strategy elements in the game. The equipment menus are graphical, and you make your choices by driving a little fork lift truck around the screen and moving the items into position on the car. Choose from PK detectors, ghost vacuums, Marshmallow Man detectors (look, I know it sounds silly if you haven't seen the film!), ghost bait, ghost traps, image intensifiers, and a portable laser confinement system. (This is very expensive and you won't be able to afford it until you've won a few games and built up your bank balance).

Once equipped, the main game starts. A map of the city, centres on the Temple of Zuul, indicated locations where Slimers are manifesting themselves. At the same time, Roamers are drifting in from the edge of the screen, attracted by the PK energy build-up at the Temple. Plot a course to the trouble spots, if possible touching Roamers to freeze them. You then get an aerial view of your car as you drive along the streets, and if you bought a ghost vacuum you can suck up the frozen Roamers on the way.

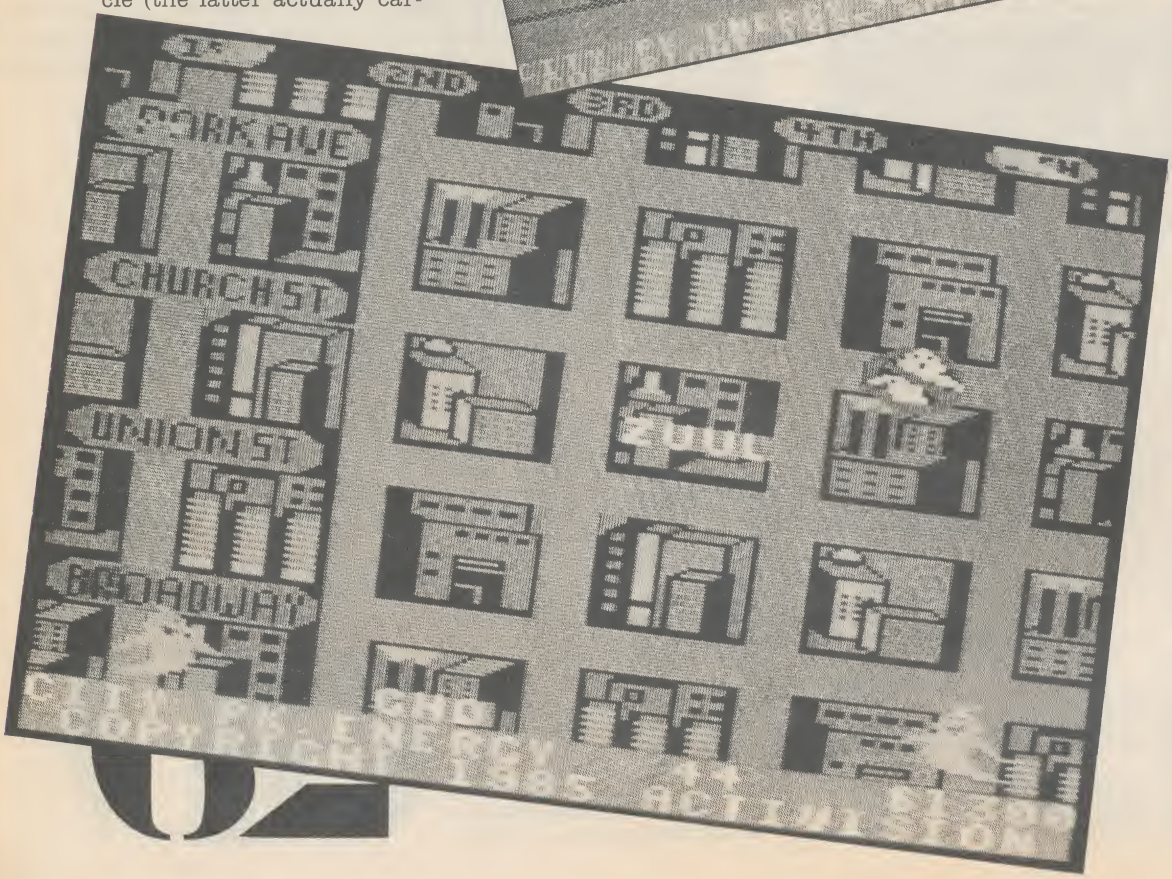
You need two men and an empty trap to catch a Slimer once you get to the scene. Drop the trap in the centre, use the proton lances of your men to manoeuvre the ghost over the trap, and fire it. Success boosts your bank balance, failure gets one of your men slimed. Trips back to base are necessary to empty traps (unless you have the laser system) and replace Slimer victims. Towards the latter stages of the game, you need to drop ghost bait at just the right time to stop the giant Stay-Puft Marshmallow Man from demolishing city blocks.

As more Roamers arrive at Zuul the PK level rises, and everything happens faster until the PK hits 9999. If you haven't made a profit, the game ends here. Otherwise you get the chance to sneak at least two of your men into the Temple for a final confrontation with Gozer.

It's hard to be objective in an appraisal of this version because I've seen the far superior Commodore 64 game. The Ray Parker theme tune, which plays over the title page (complete with displayed lyrics and sing-along bouncing ball!) and throughout the actual game, is not bad, but the speech synthesis doesn't really come off. The hardware just isn't built for it, and it might have been better to drop it (then there might have been room for in memory for the large logo on the title page, which has been omitted).

The graphics flicker a lot, which suggests the programmer didn't bother with the frame flyback sync on the CPC464 which should minimize the problem — I wonder why? It gets a bit hard on the eyes after a while.

To sum up, a strategy/arcade game with a difference, and the bonus of a tie-in with a popular film and pop song, but tries to stretch the 464's capabilities just a shade too far for comfort.



PLANET RATINGS

Originality	●●●●
Graphics	●●●
Use of machine	●●●●
Value for money	●●●●●
STAR RATING	◎
Bright Star	

Title: Key of Hope
Computer: Spectrum
Supplier: Games Workshop
Price: £7.95

Tower of Despair, which was Games Workshop's previous Quilled adventure, and by all accounts was a goodie. Key of Hope is the sequel and, I suspect will be equally well received by the adventuring community. It's a two part adventure, though to be honest I haven't got very far in the first part as the problems I've faced aren't easily solved. But, they are enticing enough to ensure that I'll be going back to the game to try and get through.

The adventure is very well constructed, and has the wonderfully frustrating habit of dangling things right before your eyes, but just out of reach. I suspect that when I do stumble across the answers I'm looking for, they'll be so obvious I'll kick myself for not guessing them sooner.

The plot is the old 'find the parts of a treasure' chestnut, but the actual design of the game is excellent. The authors have redesigned the character set into a nice medieval script, which suits the mood of the game. The location descriptions are very good, and the addition of graphics, courtesy, I assume, of The Illustrator, has not detracted from this. Obviously, these graphics occupy a fair chunk of memory, but the authors have chosen to stick to a basically text only approach, with just a small number of illustrations for the most important locations and objects, and I think they have just about got the right balance between text and graphics.

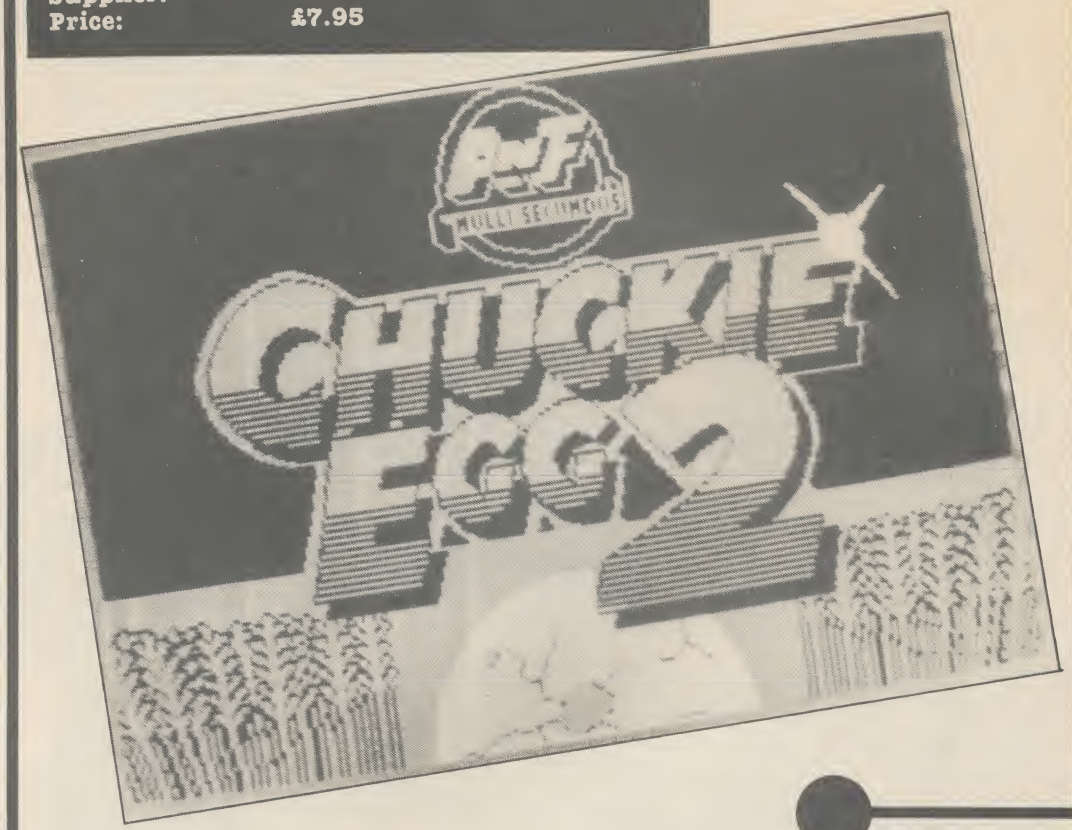
My only, minor, criticism of the game is that it suffers a little too much from the 'you are on a grassy plain that stretches as far as the eye can see' syndrome, which makes mapping a bit long-winded. Apart from that, it makes excellent use of the Quill and Illustrator (the first commercial product that I've seen using the Illustrator, by the way), and sets a high standard for other Quilled games to achieve. **C.J.**

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Bright Star

Title: Chuckie Egg 2
Computer: Spectrum 48K
Supplier: AnF
Price: £7.95



The long awaited sequel to the spectrum mega smash Chuckie egg, but is it as good as its predecessor, well yes and no. Yes it is better than Chuckie and no it isn't up to the standard that we now expect from Spectrum games. Anyway here's the game. Henhouse Harry now resides in a chocolate egg factory which contains 120 rooms so its not small. The aim is the game is more or less as before but 2 has much more of an Adventure feel to it. For instance in 2 you have to collect objects on screen that will only become useful on later screens. A nice touch but its a real bind having to retrace your steps if you get stuck. There are pink elephants and a creeping hand after you as well as sail the usual ledges and ropes to negotiate as you attempt to collect the parts of the toy kits (to put inside the eggs of course).

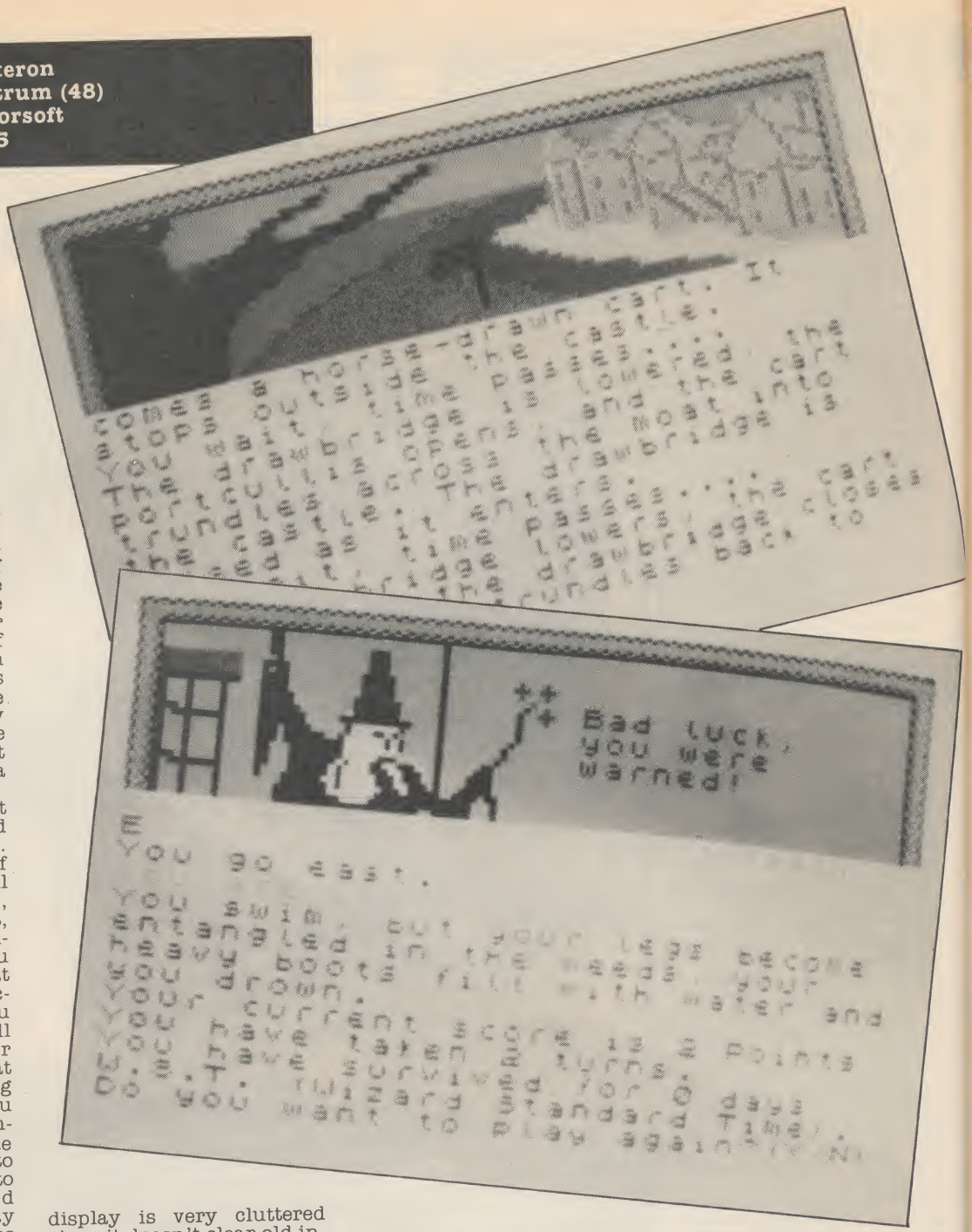
One other feature that makes this an arcade/Adventure is the Adventure style Save game feature that means yhou don't have to do all 120 screens in one go.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Bright Star

Title:	**Ashkeron**
Computer:	**Spectrum (48)**
Supplier:	**Mirrorsoft**
Price:	**£5.95**



'A new and different adventure, featuring the unique Walk-Thru Graphics System', announced the press release accompanying this new adventure game. Well, it is new, I can't deny that, but it's not particularly different from the average run of the mill adventure.

An evil Wizard has stolen the five treasures which will ensure the well-being of the people of Ashkeron, and bless the coming marriage of the Princess Zeraphina. Your task is to take on the role of Stephen the Blacksmith and brave the Wizard's castle in order to return the treasures (although why the Princess' prospective hubby can't go and do it himself remains a mystery).

You'll see from the plot that it's a pretty standard sort of adventure scenario. That wouldn't both me if the game itself were well done, but Ashkeron, though quite competent, never really caught my imagination. The Walk-Thru graphics simply mean that instead of the location pictures flashing up as you move around, they scroll across the screen in order to give the impression that you are actually 'walking thru' the game. So, if you enter 'Go East' as a command, the picture of the new location scrolls onto the screen from right to left. This doesn't add anything to the gameplay though, and the graphics themselves are small and not very detailed, being drawn mostly with small block graphics rather than pixel lines.

There are a few nice ideas in the game, such as a spell which reverses the meaning of your commands, and it was quite fun figuring out how to say the opposite of what I actually wanted to say (such as 'Ignore book' instead of 'Examine book') but the game overall just didn't hold my attention. The screen display is very cluttered since it doesn't clear old input and descriptions very often, which makes reading the text a bit of a chore. Another oversight is the frequent lack of 'visible exits' which wastes a lot of time while you type in loads of direction commands to see where your way out is.

Askeron isn't actually a bad game, just very average — if it were a budget game it would be worth a look, but for six quid I can't recommend it.

C.J.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
White Dwarf

64

Title:	**The Wreck**
Computer:	**All MSX**
Supplier:	**Electric Software**
Price:	**£14.95**

When I first saw this game I thought "Not another 3D maze" but my yawns were soon stifled by the ingenuity of the programmer.

The game requires you to negotiate three mazes, but within those mazes you must kill the guardian jellyfish and you can also stun marker fish to help you to orientate yourself as you move.

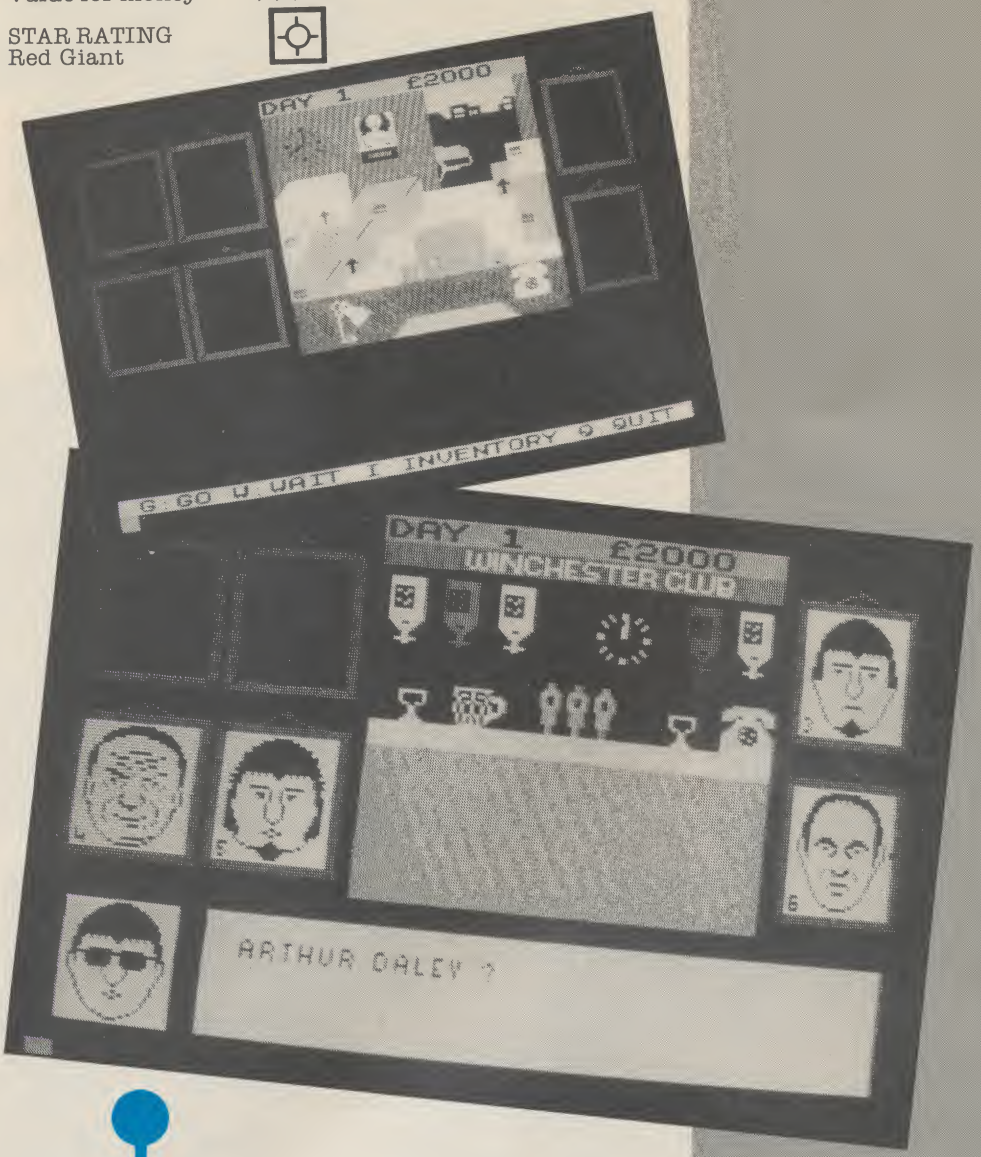
The booklet accompanying the program tells a tale of how you are on your uppers having sunk your savings into diving expeditions to find the gold ship the Beaulieu Ann which sank during the mutiny. On meeting an old seaman in a bar, you discover that he was the only survivor of the wreck and that he not only knows its location but also

Title:	**Minder**
Computer:	**Spectrum**
Supplier:	**Dk'tronics**
Price:	**£7.95**

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Red Giant



Taking the part of Arthur Daley, you have two weeks, £2000 and various goods with which to deal in order to earn as much money as you can. Starting from Arthur's home you can visit various locations, such as the lock-up, where you keep your stock of goods, Terry's flat, the Winchester club, or a number of dealers, to try and sell your goods.

The buying and selling is the heart of the game, and it's quite impressive the way that the game simulates artificial intelligence when dealers actually make the first approach and try and sell you a motley assortment of items. The language handling of the program is very good and allows you to type in some quite complicated sentences when you're discussing the prices and quantities in a deal. Try not to be too rude though, as some of the dealers can get rough.

The dealers and other characters all have animated faces that move in time to their words, and all the locations are drawn in the top half of the screen display, above the area used for text. Between locations there's an animated car that plays a strangled version ofthe Minder theme on its horns.

Minder isn't mentally taxing like an adventure, or a fast-paced zap game, but like I said, it's original and fun. So, if you see one falling off the back of a lorry, grab it. **C.J.**

has a scribbled grid which will help to deciper the codes revealing the treasure's location.

Back in the maze you discover clues scrawled on the wall which, when deciphered, give the combination of the safe which is also located somewhere on the ships labyrinthine deck. Inside the safe on the first deck is the first clue for the combination of the second safe, without which the rest of the code cannot be broken. The second safe has a similar clue for the lowest deck where the safe contains the gold.

Ingots are not all that lie inside the final safe because a strange egg is lurking there ready to hatch, which it does of course. The alien thus born starts to develop and has homicide on its mind. While racing against time to recover as much of the gold as possible, the alien tries to creep up behind you murderously.

Two of the mazes are non-linear and therefore require the use of a mapping card which is supplied with the game. Added to this you only have ten air tanks which are lowered to the entry hatch when your current tank is 60% empty (or 40% full if you're an optimist).

The graphics are excellent and though I originally saw the fact that shooting your harpoon gun was a fairly hit (and usually) miss affair as a weak point of the game, once you master the technique it becomes relatively easy.

Currently Electric are running a competition related to the game, and later this year, another one will be run which is why my review game was doctored to prevent me from descending beyond the first linear maze. **J.G.**

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Red Giant

INTO GAMES

In the third part of his action-game writing series, Rory Newman peeks and pokes the computers screen.

By R P Newman

On computers, to control most things, you use POKE. This magic word means "put in the specified box". For example:

Poke 36879,8 on the Vic 20 will turn the screen and border black because LOCATION 36879 is the screen and border colour box on the Vic and by Poking it, ",8" it puts 8 into that box. The No.8 for location 36879 is black and black.

Vic owners type in Program 1 and have some fun.

```
1 REM SINCLAIR  VERSION
10 CLS
20 LET X=0: LET Y=0
30 BORDER 0: PAPER 0
40 LET A$=INKEY$
50 IF A$="A" THEN LET X=X-1
60 IF A$="Z" THEN LET X=X+1
70 IF A$="N" THEN LET Y=Y-1
80 IF A$="M" THEN LET Y=Y+1
90 PRINT AT X,Y;"*"
100 GO TO 40
READY.
```

```
10 PRINT CHR$(147):REM CLEAR SCREEN
20 INPUT "LOCATION";X
30 INPUT "CHARACTER";Y
40 PRINT CHR$(147):REM CLEAR SCREEN
50 POKE36879,8
60 POKEX,Y
READY.
```

Use key "Z" to change the screen colour. Use key "M" to change the border colour.

Conversions:

C16 and Plus 4: use the commands 'Color 1, number' for screen 'Colour 4, number' for the border Colour codes are:

1 Black	These are the main colours, but with experimentation, it should be possible to to find what the other numbers are.
2 White	
3 Red	
4 Cyan	
5 Purple	
6 Green	
7 Blue	
8 Yellow	

On the 64, use POKE 53280,... for the border and POKE 53281,... for the screen.

On the Spectrum, use the commands Border, number and Paper, number.

The numbers are:

0 Black
1 Blue
2 Red
3 Purple
4 Green
5 Cyan
6 Yellow
7 White

So, that's colour — very nice. Originally we used POKE so what's PEEK? Well, PEEK means "see what's in the specified box". Therefore if you (on a Vic) type:

? PEEK (36879)

you will get 27, for white screen, cyan background is 27. PEEK and POKE go hand in hand.

Perhaps Vic owners will now understand PEEK (197). 197 is the POKE location for key input, each different key has a different number. It's great!

Possibly a better way of explaining POKE is to use the screen. Type in Program 2.

Use locations:

Vic 7680-8185
Vic + 16K 4096-4601
C64 1024-2023
C16 3072-4071

The characters are between 0 and 255. This character will work on Commodore computers only. Line 50 will need to be changed accordingly.

Line 60 needs explaining. x is the screen location and y is the number of the character code you chose; so really it is "Put character x in box y". This explains it more clearly, I think. The screen is a grid, a set of boxes. Any character can be put in each box. That is poking.

This is the most important part of computing, but on the Spectrum it is different. They do not use PEEK and POKE so much for the screen they use:

PRINT AT location down, location across; "WHATEVER IS TO BE PRINTED"

To check what is in the square this is used:

IF (SCREEN$ (location down, location across)) = "Whatever character you

want to check'' THEN . . .

As you can see, they are slightly different.

PEEK tells you what is in a certain location, while SCREEN$ checks to see whether a certain character is at a certain location.

It is clear that the use is unlimited. With screen$ in a Pac-man game you use:

If at location (Pac-man +1, Pacman) there is the character for a dot, then give a point.

If at location (Pac-man +1, Pacman) there is the character for a ghost, then GO TO the end game routine.

While with PEEK it would be:

If at location Pac-man +1 there is the POKE code for a dot then . . .

If at location Pac-man +1 there is the POKE code for a ghost then . . .

So you see, with Commodore machines you poke a number in a square and read a number in a square. With Sinclair Computers, you print a character at a location down, across and see if there is a certain character at that down, across location. Different formats but the same principle.

Well that's the teaching! Before the Games, let's recap.

To move:

GET A$ or A$ = IN KEY $
if A$ = " " THEN
A GOSUB must have a return
PRINT TAB(x) " "PRINTS" " x spaces along
RND is used to generate random numbers
RND(1) * 100 generates a random number between 0 and 99

(NOTE: leave out the (1) on Sinclair computers).

(RND(1) x 100) + 100 generates a random number between 100 and 100. DON'T FORGET.
INT(RND ETC) rounds the number off, give whole numbers INTEGERS.

Colour commands vary from computer to computer.

POKE location 36879,?
POKE 53280,?
Colour 4,?
Colour 1,?
Border ?
Screen ?

The screen is a grid

Use PEEK and POKE or PRINT AT and SCREEN $ for putting characters in location and seeing what characters are there.

In Program 3 you can draw pictures using the Keys A-Up, Z-Down, N-Left, M-Right.

Changes that have to be made are: C64 Line 30 to POKE 53280,0:POKE 53281,0 and line 20 to x = 1024. C16 line 30 to COLOUR 1,1:COLOUR 4,1 and Line 20 to x = 3072. On both computers the " – 22" and " + 22" in lines 50 and60 should be replaced by " – 40" and " + 40" respectively.

For the Spectrum just type in Version 2.

Now you will be able to make patterns. Good for a ten line program, but how does it work? Well . . .

```
1 REM SINCLAIR  VERSION
10 CLS
20 LET X=0: LET Y=16
30 BORDER 1: PAPER 1
40 PRINT AT X,Y;"*"
50 LET A=INT(RND*22): LET B=INT(RND*32)
60 PRINT AT A,B;"+"
70 LET A$=INKEY$
80 IF A$="Z" THEN LET Y=Y-1: PRINT AT X,Y+1;" "
90 IF A$="M" THEN LET Y=Y+1: PRINT AT X,Y-1;" "
100 IF SCREEN$(1,Y)="+"THEN GO TO 500
110 LET D=D+1
120 PRINT
130 GO TO 40
500 CLS
510 PRINT "YOU SCORED "D
READY.
```

```
1 REM COMMODORE VIC VERSION
10 PRINT CHR$(147):REM CLEAR SCREEN
20 X=7680
30 POKE 36879,8
40 GET A$
50 IF A$="A"THEN X=X-22
60 IF A$="Z"THEN X=X+22
70 IF A$="N"THEN X=X-1
80 IF A$="M"THEN X=X+1
90 POKE X,160
100 GOTO 40
READY.
```

67

Line 10 clears the screen
Line 20 on the Commodore version sets the POKE location while on the Sinclair set the position for the PRINT AT.
Line 30 sets the screen and border colour. Change them and see what looks best.
Line 40 gets the Key input.
Lines 50-80 analyse the key and move block in the appropriate way. It is self-explantatory on the Spectrum, but the reason why on the Commodores you have + / – 22 (or + / – 40) is because that is the width of the screen and 22 locations back on the Vic is one square above. You can also change the key input if you wish to suit your fingers.
Line 90 either POKES or PRINTS your square in the appropriate place.
Line 100 goes back to move again.

This is fine for a ten line program, but how about constantly changing colour? Just add this line:

```
95  Z = INT(RND(1)x255)
96  POKE 36879,Z
```

This is for the Vic, but for the C16 and 64 use:

```
95  A = INT(RND(1)x15 + 1
    :B = INT(RND(1)x15)
    + 1
```

```
1 REM COMMODORE VERSION
10 PRINT CHR$(147):REM CLEAR SCREEN
20 X=7691
30 POKE 36879,8:REM BORDER/SCREEN FOR VIC
40 POKE X,42
50 A=INT(RND(1)*506)+7680
60 POKE A,160
70 GET A$
80 IF A$="Z" THEN X=X-1:POKE X+1,32
90 IF A$="M" THEN X=X+1:POKE X-1,32
100 IF PEEK(X+22)=160 THEN GOTO 500
110 D=D+1
120 PRINT
130 GOTO 40
500 PRINT CHR$(147):REM CLEAR SCREEN
510 PRINT "YOU SCORED "D
READY.
```

68

and for the 64

```
96  POKE 53290,A:POKE
    53281,B
```

for the C16

```
96  COLOUR 4, A: COL-
    OUR 4,B
```

and the Spectrum

```
95  A = INT(RNDx 8) + 1:
    B = INT(RNDx8) + 1
96  BORDER A: PAPER B.
```

Now that is done, how about just moving, no trail. Well, on the Vic add to

line 50 "POKE x + 22,32"
line 60 "POKE x - 22,32"
line 70 "POKE x + 1,32"
line 80 "POKE x - 1,32".

32 is the POKE code for a space.

On the C16 and 64 use the same changes as on the Vic, but now use for lines 50 replace 22 with 40 and line 60 the same.

On the Spectrum, you need to add to:

Line 60 "PRINT AT x + 1,Y;" SPACE "
Line 60 "PRINT AT x - 1,Y;" SPACE "
Line 70 "PRINT AT x,Y + 1; " SPACE "
Line 80 "PRINT AT x,Y - 1; " SPACE "

Having done this, you now have a number of variations and should be in position to write your own games. How about a game where you have a random location? The random character is only possible at the moment on Commodores, but Spectrum owners with imagination will, I'm sure, think of something.

The Final Program this month is Asteroid Dodge. You use the star at the rop of the screen and you must avoid the blocks, which are asteroids. To move use Z and M, but you may change them if you want. Here again there are two versions, one for the Commoore Computers and one for the Spectrum. A score feature is included and, with a bit of patience, you should be scoring over 500 points.

To convert this to 64, the following changes will be needed:

Line 20 to x = 1044
Line 30 to POKE 3280,0: POKE 53281,0
Line 50 to A = INT(RND(1) x1000) + 1024
Line 100 to IF PEEK (x + 40) = 160 THEN GOTO 500

On the C16 change:

Line 20 to x = 3072
Line 30 to Colour 4,1: Colour 1,1
Line 50 to A + INT(RND(1) x1000) + 3072
Line 100 to IF PEEK (x + 40) = 160 THEN GOTO 500.

NOTE: You can change the screen and border colours to suit you and Vic owners can use PEEK(197) in the usual way.
How does it work?

Line 10	clears the screen
Line 20	sets the POKE location or the PRINT AT variables
Line 30	sets the screen and border colour
Line 40	POKES or PRINTS your space ship (a star) in the middle of the top line
Line 50	chooses a random POKE location for the asteroids (or random variables for PRINT AT)
Line 60	POKES the asteroid (or PRINTS it)
Line 70	gets a key input
Lines 80 and 90	see if you move. If you do, it deletes the old space ship and repositions you in the appropriate place
Line 100	checks to see if you have hit a piece of trash, an asteroid; if you have, it jumps to 500 (i.e. if the square in front of your space ship has the POKE code of an asteroid (or the graphic of one) it jumps to line 500)
Line 110	increases your score, D, by one
Line 120	PRINTS a line of spaces. This scrolls the screen upwards
Line 130	goes back to 40; if you have crashed, you will now have jumped to line 500 (see line 100)
Line 500	clears the screen
Line 510	PRINTS your score.

That's Asteroid Dodge. I hope it gives you some ideas. Next issue I shall be dealing with UDGs (User Defined Graphics) with which you will be able to use professional looking graphics games, instead of relying on keyboard characters. Until then, good luck with writing your own games and good computer gaming!

Many thanks to D Tuffitt and R Hearn for help with Spectrum and C16 programming.

Take Control

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CG

CRAZY SAILING

Andrew Shaw

The object of the game is to guide your boat through the harbour. Full instructions are included in the program.

I have used various machine code routines in 'Crazy Sailing'. The object code for these has been stored in Data statements in lines 30,000 onwards. Be careful when you are entering lines, as one wrong character may cause your system to crash. SAVE "D:CRZYSAIL" or CSAVE the program before attempting to RUN it.

Poke 16,64: Poke 53774,64 has been used to disable the "break" key.

Press 'System Reset' to exit.

```
0 REM CRAZY SAILING.
1 REM BY A. SHAW. COMPLETED MAY '84
2 RAMTOP=PEEK(106)
4 GRAPHICS 18:SETCOLOR 0,7,8:POKE 16,64:
POKE 53774,64
6 POSITION 3,3:? #6;" INITIALIZING "
8 POSITION 3,5:? #6;"CRAZY SAILING"
9 POSITION 6,7:? #6;"HANG ON"
10 GOSUB 30000
11 SOUND 0,0,0,0:SOUND 1,0,0,0
15 GRAPHICS 18:SETCOLOR 0,12,12:SETCOLOR
 4,3,2
20 POKE 16,64:POKE 53774,64
25 POSITION 3,2:? #6;"CRAZY  SAILING"
30 POSITION 3,4:? #6;"BY ANDREW SHAW"
35 POSITION 4,6:? #6;"INSTRUCTIONS"
40 POSITION 7,8:? #6;"Y OR N"
45 OPEN #1,4,0,"K:":X=USR(1664):GET #1,K
:CLOSE #1
50 IF CHR$(K)="Y" THEN GOSUB 10000:GOTO
60
55 IF CHR$(K)<>"N" THEN 45
60 GRAPHICS 18:SETCOLOR 0,12,12:SETCOLOR
 4,8,0:POSITION 0,2:? #6;"select difficu
lty ";DIF
61 POKE 16,64:POKE 53774,64:SETCOLOR 3,3
,6
62 POSITION 2,4:? #6;"(1=EASY,5=HARD)"
65 POSITION 0,6:? #6;"press start to pla
y"
70 K=PEEK(53279):IF K=6 THEN FOR P=200 T
O 0 STEP -5:SOUND 0,P,10,10:FOR W=1 TO 5
:NEXT W:NEXT P:SOUND 0,0,0,0:GOTO 82
75 IF K=5 THEN DIF=DIF+1:FOR P=0 TO 200
STEP 10:SOUND 0,P,10,10:NEXT P:SOUND 0,0
,0,0:IF DIF>5 THEN DIF=1
80 POSITION 18,2:? #6;DIF;"  ":FOR W=1 T
0 100:NEXT W:GOTO 70
82 POSITION 0,8:? #6;"PROGRESIVE PLAY Y/
N?"
84 OPEN #1,4,0,"K:":GET #1,K:CLOSE #1
85 IF K=89 THEN PROG=1
86 IF K=78 THEN PROG=0
87 IF K<>78 AND K<>89 THEN 84
90 SPEED=60-(DIF*10)
95 COLOR 32:FOR X=0 TO 19:PLOT X,0:DRAWT
O X,11:SOUND 0,255-(X*10),10,10:FOR W=1
TO 10:NEXT W:NEXT X
96 SOUND 0,0,0,0
97 POKE 106,RAMTOP:POKE 106,PEEK(106)-16
100 GRAPHICS 23:SETCOLOR 0,0,8:SETCOLOR
1,1,4:SETCOLOR 2,0,12:SETCOLOR 4,8,0:COL
OR 1:POKE 559,0:POKE 765,1
105 POKE 16,64:POKE 53774,64
110 PLOT 150,90:DRAWTO 80,70:DRAWTO 0,70
:POSITION 0,90:XIO 18,#6,0,0,"S:":POKE 7
65,1
120 PLOT 65,70:DRAWTO 65,35:DRAWTO 30,35
:POSITION 30,70:XIO 18,#6,0,0,"S:"
130 COLOR 0:FOR X=35 TO 45 STEP 2:PLOT X
,60:DRAWTO X,70:NEXT X
140 FOR X=33 TO 57 STEP 8:PLOT X,42:DRAW
TO X+4,42:DRAWTO X+4,46:DRAWTO X,46:DRAW
TO X,42:NEXT X
150 FOR X=35 TO 59 STEP 8:PLOT X,42:DRAW
TO X,46:NEXT X:FOR X=33 TO 57 STEP 8:PLO
T X,44:DRAWTO X+4,44:NEXT X
160 COLOR 1:PLOT 27,35:DRAWTO 68,35:DRAW
TO 48,20:POSITION 27,35:XIO 18,#6,0,0,"S
:"
170 COLOR 2:PLOT 49,20:DRAWTO 49,13:DRAW
TO 55,13:DRAWTO 55,16:DRAWTO 49,16
180 COLOR 3:PLOT 65,3:DRAWTO 71,3:PLOT 6
3,4:DRAWTO 72,4:PLOT 61,5:DRAWTO 73,5:PL
OT 59,6:DRAWTO 71,6
190 PLOT 61,7:DRAWTO 69,7:PLOT 62,8:DRAW
TO 67,8:PLOT 64,9:DRAWTO 66,9:COLOR 0
210 COLOR 3:PLOT 50,14:DRAWTO 54,14:COLO
R 1:PLOT 50,15:DRAWTO 54,15
220 COLOR 3:PLOT 100,3:DRAWTO 105,3:PLOT
 99,4:DRAWTO 106,4:PLOT 97,5:DRAWTO 108,
5:PLOT 94,6:DRAWTO 109,6
230 PLOT 92,7:DRAWTO 107,7:PLOT 90,8:DRA
WTO 108,8:PLOT 91,9:DRAWTO 106,9
235 PLOT 93,10:DRAWTO 104,10:PLOT 93,11:
DRAWTO 99,11:PLOT 95,12:DRAWTO 97,12
240 PM=PEEK(106):PMB=PM*256:RESTORE 285
250 POKE 54279,PM:POKE 53277,3:POKE 5325
6,1:POKE 623,4
260 FOR I=PMB+512 TO PMB+640:POKE I,0:NE
XT I
270 POKE 704,52:X=80:POKE 53248,X:Y=75
280 FOR I=PMB+512+Y TO PMB+523+Y:READ A:
POKE I,A:NEXT I
285 DATA 0,0,0,0,16,16,56,56,127,127,126
,124
290 POKE 559,46:FOR W=1 TO 500:NEXT W
310 FOR X=80 TO 128:POKE 53248,X:SOUND 0
,X,120,10:SOUND 0,0,0,0:FOR W=1 TO 10:NE
XT W:NEXT X
320 FOR X=128 TO 190 STEP 3
325 I=USR(DOWN,PMB+512+Y):Y=Y+1
327 FOR X1=1 TO 3:POKE 53248,X+X1:SOUND
0,255-X+X1+Y,10,10:SOUND 0,0,0,0
335 NEXT X1:NEXT X
340 FOR X=190 TO 220:POKE 53248,X:SOUND
0,X,120,10:SOUND 0,0,0,0:FOR W=1 TO 10:N
EXT W:NEXT X
350 FOR V=15 TO 0 STEP -1:SOUND 0,255,12
0,V:SOUND 0,0,0,0:FOR W=1 TO 20:NEXT W:N
EXT V
360 FOR W=1 TO 100:NEXT W
370 REM *** MAIN LOOP ***
400 GRAPHICS 17:SETCOLOR 0,0,14:SETCOLOR
 4,8,2:SETCOLOR 3,3,6:SETCOLOR 2,3,6:POK
E 53277,0:POKE 559,0
405 POKE 16,64:POKE 53774,64
410 POKE 756,CH
416 POSITION 0,23:? #6;"sc ";SC;"  li ";
LIVES;"  sk ";(60-SPEED)/10
420 FOR X=0 TO 19 STEP 2:FOR N=1 TO 4
430 Y=INT(RND(0)*15)+2
440 LOCATE X,Y,Z:IF Z<>32 THEN 430
450 POSITION X,Y:? #6;"("
460 NEXT N:NEXT X
462 FOR N=1 TO 2:POSITION 11,INT(RND(0)*
19)+3:? #6;"(":NEXT N
464 POKE 559,34
465 POSITION 4,1:? #6;"press 'FIRE'"
466 IF STRIG(0)=1 THEN 466
467 POSITION 0,1:? #6;"
                      "
470 COLOR 43:PLOT 0,1:DRAWTO 10,1:PLOT 1
2,1:DRAWTO 19,1
475 X=INT(RND(0)*19):LOCATE X,22,Z:IF Z<
>32 THEN 475
480 FOR Y=22 TO 0 STEP -1
```

```
490 S=STICK(0)
495 IF S=15 OR S=14 OR S=13 THEN OX=X:OY
=Y+1:GOTO 515
500 IF S=11 OR S=10 OR S=9 THEN OX=X:X=X
-1:OY=Y+1
510 IF S=7 OR S=6 OR S=5 THEN OX=X:X=X+1
:OY=Y+1
512 IF X<0 THEN X=0
514 IF X>19 THEN X=19
515 LOCATE X,Y,Z:IF Z<>32 THEN GOSUB 110
00:GOTO 400
520 POSITION OX,OY:? #6;" "
530 POSITION X,Y:? #6;")"
535 SOUND 0,X+Y,0,14:SC=SC+10
537 POSITION 0,23:? #6;"sc ";SC;"  li ";
LIVES;"  sk ";(60-SPEED)/10
540 FOR W=1 TO SPEED:NEXT W:NEXT Y
550 SOUND 0,0,0,0
555 IF  NOT PROG THEN GOSUB 600:GOTO 570
560 IF X>9 AND X<=12 THEN GOSUB 600
563 TY=TY+1:IF TY=4 THEN TY=1:SPEED=SPEE
D-10
565 IF SPEED<=10 THEN SPEED=10
570 IF X<=9 OR X>12 THEN GOSUB 11000:GOT
O 400
580 GOTO 400
600 POSITION 0,0:? #6;"
   ";:REM 20 SPACES
610 POSITION 3,0:? #6;"YOU'VE MADE IT":S
C=SC+INT(RND(0)*100)+40
615 GOSUB 620:RETURN
620 FOR N=1 TO 7
630 FOR P=0 TO 200 STEP 40
640 SOUND 0,P,10,10:SOUND 1,P+2,10,10
650 NEXT P:NEXT N
660 SOUND 0,0,0,0:SOUND 1,0,0,0
670 RETURN
820 RESTORE 865
840 READ I,J:IF I=3 THEN RETURN
845 IF I=0 THEN 860
850 SOUND 0,I,10,14:SOUND 1,I-1,10,14
855 FOR I=1 TO J:FOR K=1 TO 20:NEXT K:NE
XT I:SOUND 0,0,0,0:SOUND 1,0,0,0
860 FOR I=1 TO 10:NEXT I:GOTO 840
865 DATA 243,4,243,4,243,1,243,4,204,4,2
17,1,217,4,243,1,243,4,255,1,243,6,3,3
9999 REM *** INSTRUCTIONS ***
10000 GRAPHICS 0:SETCOLOR 2,8,0:SETCOLOR
 1,0,12:SETCOLOR 4,8,0:SETCOLOR 0,15,12:
POKE 752,1
10005 POKE 16,64:POKE 53774,64
10010 DL=PEEK(560)+256*PEEK(561)+3:POKE
DL,71:POKE DL+3,6
10020 POSITION 3,0:? "CRAZY  SAILING":PO
SITION 23,0:? "BY ANDREW SHAW"
10030 ? :? "  The idea of the game is to
 guide    your boat through the harbour
and     out through the gap ";
10035 ? "at the top of     the screen."
10040 ? :? "  There are five levels of p
lay.      Level 1 is easiest. Level 5 is
        hardest. You can change ";
10045 ? "levels by     pressing the SELE
CT key."
10050 ? :? "  To control the boat you us
e a       joystick pluged in port 1. You
 can    only move the boat ";
10055 ? "left or right.     The computer
 will move it forward     automaticaly."
10060 ? :? ,"Press any key":POKE 764,255
10065 IF PEEK(764)=255 THEN 10065
10070 GRAPHICS 0:SETCOLOR 2,8,0:SETCOLOR
 1,0,12:SETCOLOR 4,8,0:SETCOLOR 0,15,12:
POKE 752,1
10075 POKE 16,64:POKE 53774,64
10080 ? :? "  You have three lives. You
lose      one life every time you hit a
rock.   You will also lose one ";
10085 ? "life if you    colide with the
barrier at the top    of the screen."
10090 ? :? "  You score points as follow
s:":?
10100 ? "1) For every successfull move
          forward, you score 10 pts."
10110 ? :? "2) For every successfull har
bour          crossing, you score 230 pts
 & a       random bonus between ";
10120 ? "40 and 140       pts."
10130 ? :? "  You will also score a bonu
s of 10   times the difficulty level.Thi
s will  be added at the end of ";
10135 ? "the game."
10140 ? :? ,"Press any key.":POKE 764,25
5
10145 IF PEEK(764)=255 THEN 10145
10150 RETURN
11000 FOR V=100 TO 0 STEP -10
11005 POSITION OX,OY:? #6;"*"
11010 SOUND 0,255-V,12,10:SOUND 1,200-V,
12,10:POKE 710,V
11020 NEXT V:SOUND 0,0,0,0:SOUND 1,0,0,0
:POKE 710,PEEK(712):GOSUB 820
11025 POSITION OX,OY:? #6;" "
11030 LIVES=LIVES-1:IF LIVES=0 THEN 1200
0
11040 RETURN
12000 GRAPHICS 17:SETCOLOR 4,8,0:SETCOLO
R 0,12,10:POKE 16,64:POKE 53774,64
12010 POSITION 4,1:? #6;"############"
12015 POSITION 4,2:? #6;"#GAME OVER#"
12020 POSITION 4,3:? #6;"############"
12021 SC=SC+(10*DIF)
12022 POSITION 2,8:? #6;"YOUR SCORE=";SC
:IF SC>HSC THEN HSC=SC
12023 POSITION 2,10:? #6;"HIGH SCORE=";H
SC
12025 POSITION 0,21:? #6;"PRESS START TO
 PLAY"
12030 POKE 710,PEEK(20)
12035 IF PEEK(53279)<>6 THEN 12030
12040 DIF=1:SC=0:LIVES=3:GOTO 15
30000 RESTORE 30000
```

ATARI

```
30010 DIM DOWNCODE$(21):DOWN=ADR(DOWNCOD
E$)
30020 FOR I=DOWN TO DOWN+20:READ B:POKE
I,B:NEXT I
30030 DATA 104,104,133,204,104,133,203
30035 DATA 160,10,177,203,200,145,203
30040 DATA 136,136,192,255,208,245,96
30050 DIM MC$(32)
30060 FOR I=1 TO 32:READ A:MC$(I,I)=CHR$
(A):SOUND 0,I*10,10,10:NEXT I
30070 DATA 104,104,133,213,104,133,212,1
04,133,215,104,133,214,162,4,160,0,177,2
12,145,214
30080 DATA 200,208,249,230,213,230,215,2
02,208,240,96
30085 CH=PEEK(106)-8:CHSET=CH*256
30090 I=USR(ADR(MC$),57344,CHSET)
30100 DIM CHAR$(3):CHAR$="()+"
30110 FOR I=1 TO 3
30120 CHPOS=CHSET+(ASC(CHAR$(I))-32)*8
30130 FOR J=0 TO 7:READ A:POKE CHPOS+J,A
:SOUND 0,I+J,10,10:NEXT J:NEXT I
30140 DATA 8,28,28,62,62,127,127,255
30150 DATA 24,60,126,126,195,195,195,195
30160 DATA 255,255,255,255,255,255,255,2
55
30200 LIVES=3:SC=0:DIF=1:LEVEL=1:PROG=1
32000 REM VBLANK ROUTINE TO ROTATE
32010 REM ALL 256 COLOURS*
32020 REM FROM I/O ISSUE 4 WINTER '83
32030 FOR A=0 TO 63
32040 READ ITEM
32050 POKE 1664+A,ITEM
32055 SOUND 0,A*10,10,10
32060 NEXT A
32170 RESTORE :RETURN
32500 DATA 173,36,2,141,193,6
32510 DATA 173,37,2,141,194,6
32520 DATA 160,180,162,6,169,7
32530 DATA 32,92,228
32540 DATA 238
32550 DATA 192,6,173,192,6
32560 DATA 141,10,212,141
32570 DATA 22,208
32580 DATA 174,252,2,232,240,238
32590 DATA 172,193,6,174,194,6
32600 DATA 169,7,32.92,228,104,96
32610 DATA 206,196,2,173,196
32660 DATA 2,141,192,6,76,98,228
```

WORDSEARCH

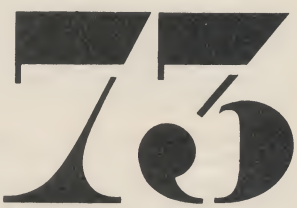
Robin Davies

The object of the game is to find a group of words inputed by the user in a 15 x 15 grid of letters.

The game runs two different ways one with a time limit and another with as much time as you want.

```
10 POKE53280,0:POKE53281,0
10 REM CLR WHT   2*CRD-  5*CRL   2*CRD-  4*CRL   2*CRD-  7*CRL
11 PRINT"■";TAB(17);"■WORD■■■■■■FINDER■■■■■BY■■■■■■■■ROBIN DAVIES"
12 FORA1=1TO1000:NEXTA1
12 REM  37*CRD CLR
13 A5$="■■■■■■■■
```

```
80 C1=C1-1
81 IFC1=C2THENGOSUB185
82 GOSUB197:GETA1$:IFA1$=""THEN77
82 REM WHT   4*CRL-YEL
83 INPUT"■NUMBER OF LINES DOWN     ■■■■■";B6
84 IFB6=0THENGOTO130
84 REM WHT   4*CRL-YEL
85 INPUT"■NUMBER OF LINES ACROSS     ■■■■■";B7
86 IFB7=0THENGOTO130
86 REM WHT   4*CRL-YEL
87 INPUT"■NUMBER OF WORD     ■■■■■";B8
88 IFB8=0THENGOTO130
88 REM   2*CRU
89 IFB8>10THENPRINT"□□":GOTO87
90 IFB6<>A6(B8)THEN78
91 IFB7<>A7(B8)THEN78
92 POKE1043+40*B8+18+40,31
93 POKE55315+40*B8+18+40,6:B3=B3+1
94 FORA3=0TOLEN(A2$(B8))-1
95 GOSUB187:B1=1187-41+40*B6+B7+A3*A5(B8)+A3*40*A4(B8)+40
96 IFPEEK(B1)<30THENPOKEB1,PEEK(B1)+128:POKEB1+54272,14
97 NEXTA3
98 IFB3=B4THEN100
99 GOTO78
100 FORA3=1TO1000:NEXTA3
100 REM WHT-HOM
101 PRINT"■■YOU HAVE COMPLETED THIS WORD FINDER  "
102 FORA3=1TO2000:NEXTA3:B4=2:GOTO131
103 OPEN1,4:CMD1
104 GOSUB118
105 A7=0
106 PRINT#1,""
107 FORA3=1TO15
108 FORA9=1TO15
109 A4$=A4$+A6$(A3,A9):NEXT
110 IFA3>B4+1THENGOTO112
110 REM   6*CRR
111 PRINT#1,A4$;"■■■■■■";A2$(A7):A7=A7+1:GOTO113
112 PRINT#1,A4$
113 A4$=""
114 NEXT
115 PRINT#1,"","",""
116 CLOSE1,4
117 RUN14
118 PRINT#1,A7$
119 PRINT#1,""
120 PRINT#1,"PUZZLE...              LIST...
121 PRINT#1,"":RETURN
121 REM WHT-CLR CRD
122 PRINT"■□WORD FINDER■
122 REM CRD
123 PRINT"DO YOU WISH TO PLAY■
123 REM YEL WHT CRD
124 PRINT"FROM ■1).■ PRINTOUT■
124 REM YEL WHT
125 PRINT" ON  ■2).■ COMPUTER
126 GETA1$:IFA1$=""THEN126
127 IFA1$="1"THENGOTO103
128 IFA1$="2"THENGOTO178
129 GOTO126
129 REM WHT-HOM
130 PRINT"■■  RESIGN...   RESIGN...   RESIGN...  "
130 REM HOM- 20*CRD
131 PRINT"■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■"
131 REM CRU
132 FORA1=1TO3:PRINT"                                    ":NEXTA1:PRINT"□"
133 FORB8=1TOB4
134 IFB4=2THENGOTO139
135 FORA3=0TOLEN(A2$(B8))-1
136 B1=1187-41+40*A6(B8)+A7(B8)+A3*A5(B8)+A3*40*A4(B8)+40
137 IFPEEK(B1)<30THENPOKEB1,PEEK(B1)+128:POKEB1+54272,14
138 NEXTA3:NEXTB8
138 REM WHT-CRU
139 PRINT"■□TO CONTINUE HIT A KEY"
140 GETA1$:IFA1$=""THEN140
141 IFA1$=" "THEN143
142 GOTO140
142 REM CLR
143 PRINT"□"
144 RUN14
144 REM RED WHT
145 PRINT"■"A2$(A3)"■ IS MORE THAN 10 LETTERS"
145 REM WHT
146 PRINT"■INPUT ANOTHER WORD"
147 GOTO25
148 READA1$
149 IFA1$="-"THENA1$="CONTINUE":GOSUB172
150 IFA1$="+"THENA1$="START":A1=2:GOSUB172
150 REM HOM
151 FORA1=1TO39:PRINT"■";RIGHT$(A5$,C3);RIGHT$(A1$,A1):NEXTA1:C3=C3+1
152 GOTO148
153 DATA"IN WORD FINDER YOU ARE GIVEN A LIST OF",""
154 DATA"WORDS WHICH CAN BE FOUND IN A GRID OF",""
155 DATA"LETTERS.",""
156 DATA" THE HIDDEN WORDS CAN BE READ FORWARD,",""
157 DATA"BACKWARD, UP, DOWN AND DIAGONALLY.",""
158 DATA" WHEN YOU HAVE DISCOVERED A WORD IN THE",""
159 DATA"LETTER GRID YOU MUST FIRST INPUT THE",""
160 DATA"CO-ORDINATES OF THE FIRST LETTER OF THE",""
161 DATA"WORD, THEN SECONDLY INPUT THE NUMBER OF",""
162 DATA"THE WORD YOU HAVE FOUND.","",-
163 DATA" TO QUIT THE GAME TYPE 0 AND HIT RETURN.",""
164 DATA" TO STOP THE CLOCK IN THE LIMITED TIME",""
165 DATA"GAME PRESS 'SPACE BAR'",""
166 DATA" THE GAME CAN BE PLAYED ON THE COMPUTER",""
167 DATA"OR A PRINTER DEPENDING ON WHAT YOU HAVE",""
168 DATA"GOT.",""
169 DATA" IF YOU GOING TO USE A PRINTER MAKE",""
170 DATA"SURE IT IS ON AND THAT THERE IS PAPER.","",+
171 END
172 PRINT"PRESS SPACE TO ";A1$
173 GETA1$:IFA1$=""THEN173
174 IFA1$=" "THEN176
175 GOTO173
176 IFA1=2THENGOTO14
176 REM CLR
177 C3=1:PRINT"□":READA1$:RETURN
177 REM WHT-CLR
178 PRINT"■□WHICH GAME DO YOU WISH TO PLAY"
178 REM CRD YEL WHT
179 PRINT"■      ■1).■ TIME LIMIT"
179 REM CRD YEL WHT
180 PRINT"■      ■2).■ AS LONG AS YOU WANT"
181 GETA1$:IFA1$=""THEN181
182 IFA1$="1"THENB9=1:C1=B4*300:C2=0:RETURN
183 IFA1$="2"THENB9=2:RETURN
184 GOTO181
184 REM WHT-HOM
185 PRINT"■■YOUR TIME HAS EXPIRED,  BAD LUCK...  "
186 GOTO131
187 S2=54272:V=S2+24
188 POKES2+5,16+3:POKES2+6,0
189 U=15:POKEV,U
190 POKES2+1,10
191 FORCH=1TO8
192 POKES2+4,33
193 FORCO=1TO50:NEXTCO
194 POKES2+4,0
195 U=U-1:POKEV,U:NEXTCH
196 RETURN
197 S1=54272
198 FORL1=0TO24
199 POKES1+L1,0
200 NEXT
201 POKES1+1,130
202 POKES1+5,9
203 POKES1+15,30
204 POKES1+24,15
205 POKES1+4,21
206 POKES1+4,20
207 RETURN
READY.
```



COMPUTERS

PUZZLE...	LIST...
VTAZUIRATAAYCEE	
EBNOGARDXTFMXSJ	COMMODORE
BWXZPZPKMAHAVIB	ACORN
ADVRFLOOKCXGBRE	SINCLAIR
TADVICSWVOAYKPJ	ENTERPRISE
KRDAPAMFMRYEARI	DRAGON
OTZFJTLSINZSDEK	ATARI
QSXZYMMCXYMRFTB	AMSTRAD
AMIHDJLMNULZNNV	VIC
RAMKFFFQVIVJSEQ	ATMOS
NGZPRAXUQSSMRIK	TEXAS
IDVDCOMMODOREOI	
FHTALUWSAXETOER	
WHFLEINMJVSTMMP	
JQJYUCTULKYNUHC	

Steve Lucas

Many years ago, I set out from Earth on a routine trading mission to Hlor, a small but friendly planet in a far distant galaxy. On my journey, I was attacked by a strange alien spacecraft and was forced to land on a planet inhabited by some weird creatures. My spaceship is damaged and I'd like your help to repair it so that I can return home. You should give me instructions in the form of one or two word sentences such as **get food**.

Note

All instructions must be given in lower case. The program is written in the lower/upper case mode and you should enter this mode before typing in the program (line 50 locks the program into this mode).

Words Understood

Here is a list of some of the words I understand.

n,s,e,w,go,in,out,up,down get,take,inventory,drop, leave,help,examine,score, eat,drink,blast,burn,shoot, kill,swim,insert,throw,tie, climb,rub,wear,mend,repair,fill,use.

Hints

These should only be read if you are stuck, as the fun of playing comes from finding th solution for yourself.

1. You'll need a flame thrower to get past the triffid!
2. You can only get the coin if you are invisible . . . try vanishing cream
3. You'll need a rope which is firmly attached to climb the cliff!
4. Fat monsters are supposed to like alien art
5. Try using the jetpack to get back to your ship

I'm not giving any more away!

```
10 rem ** red alert **
20 rem ** an adventure game for the commodore plus 4 / c16
30 rem "(c) Steve W. Lucas  January 1985"
40 rem ** select lower case/upper case
50 print chr$(14);chr$(8)
60 scnclr:print:printtab(12);chr$(28);"Red Alert"
70 printtab(12);"==========
80 print:printchr$(30);" An adventure game for the Plus 4 /C16"
90 print:printchr$(154);"Please help me."
100 print"I set out from earth many years ago on a";
110 print"trading mission to Hlor, a small but"
120 print"friendly planet in a far distant galaxy."
130 print:printchr$(149);"On my journey I was attacked by a"
140 print"strange alien spacecraft and my ship has";
150 print"crashed on a planet inhabited by some   wierd creatures."
160 print:printchr$(154);"You must help me to escape by giving me"
170 print"instructions in the form of two word    sentences such as 'eat food'"
180 print:printchr$(28)
190 dim s%(23,4),q$(23),g$(20),n$(20),b%(20),n%(20)
200 for x=1 to 23:read q$(x):for y=1 to 4:read s%(x,y):next y,x
210 data"in dense woodland. My wrecked spaceship is here.",0,0,2,0
220 data"in a vast clearing. Large numbers of    Zombies are standing around."
230 data 0,4,3,1,on a launch pad for alien spacecraft,0,0,0,2
240 data"on a narrow footpath. A triffid blocks  my way.",2,0,0,0
250 data "at the side of a deep river of mercury",0,9,6,0
260 data "on the banks of a river of mercury.",0,0,7,0
270 data"in a meadow. The grass is so high that Ican't see over it.",4,11,8,6
280 data"in an alien zoo. There's a large cage ofhumans who are asleep."
290 data 0,0,0,7,"in a small quarry. There is a hut here.",5,0,0,0
300 data"inside the hut. A large, fat, ugly aliensleeps on the floor.",0,0,0,0
310 data"on a gently sloping hillside.",7,0,12,0
320 data"at the foot of an enormous cliff. I can see a tree at the top."
330 data 0,0,0,11,"on the clifftop. A small tree grows here",0,0,0,14
340 data "walking along the clifftops.",0,15,13,0
350 data "on the steps of an alien art gallery",14,0,0,17
360 data"in an alien art gallery.",0,0,0,0
370 data"in a narrow alleyway between buildings  made of slime.",18,0,15,0
380 data"at the entrance to a large building. Thedoor is closed.",0,17,0,0
390 data"inside a strange building made of jelly.",0,20,18,0
```

```
400 data "in a narrow undulating walkway.",19,21,0,0
410 data"at the bottom of a flight of stairs.",20,0,0,0
420 data"on the roof of the building of jelly.   Stairs lead down.",0,0,23,0
430 data"on the roof of the building.",0,0,0,22
440 for x=1 to 20:read g$(x),b%(x),n$(x):n%(x)=x:next x
450 data a lump of mouldy jelly,3,jelly,a flame thrower,1,thrower
460 data an empty fuel tank,1,tank,my spaceship,1,spaceship
470 data a zombie,4,zombie,a coin slot,18,slot,a golden coin,10,coin
480 data a jar of vanishing cream,8,cream,a rope,6,rope,a plank of wood,4,wood
490 data a metal hook,5,hook,an empty can,17,can,a fuel dispenser,23
500 data fuel,a pair of alien goggles,16,goggles,an evil fat blodgat,20,blodgat
510 data a sheet of metal,14,metal,a rivet gun,19,rivet
520 data a crystal warp controller,21,crystal,an empty crystal socket,1
530 data socket,a jet pack,22,jetpack
540 print:print"Press the <Space Bar> to start the game."
550 getkey a$:scnclr:p%=1:s%=0
560 do
570 if p%=20 and au<1 then gosub 2290
580 print"■ I am :- ■":printq$(p%):a$=""
590 if s%(p%,1)>0 then a$="North"
600 if s%(p%,2)>0 and len(a$)>0 then a$=a$+",South"
610 if s%(p%,2)>0 and len(a$)=0 then a$="South"
620 if s%(p%,3)>0 and len(a$)>0 then a$=a$+",East"
630 if s%(p%,3)>0 and len(a$)=0 then a$="East"
640 if s%(p%,4)>0 and len(a$)>0 then a$=a$+",West"
650 if s%(p%,4)>0 and len(a$)=0 then a$="West"
660 if p%=9 or p%=15 then a$=a$+",In"
670 if p%=10 or p%=16 then a$="Out"
680 if p%=21 then a$=a$+",Up"
690 if p%=22 then a$=a$+",Down"
700 print:print"■ I can go :-■":printa$
710 e=0:for t=1 to 20:pp%=0:if b%(t)=p% then pp%=1
720 if pp%=1 then 740
730 next:goto 760
740 if e=0 then print:print"■ That looks like :-■"
750 printg$(t):e=1:goto 730
760 print:print"■ What should I do now ■";:input z$:scnclr
770 b$=left$(z$,2):c$=left$(z$,3):d$=left$(z$,4):k=0
780 if(b$="n" or d$="go n") and s%(p%,1)>0 then p%=s%(p%,1):k=1
790 if(b$="s" or d$="go s") and s%(p%,2)>0  then p%=s%(p%,2):k=1
800 if(b$="e" or d$="go e") and s%(p%,3)>0  then p%=s%(p%,3):k=1
810 if(b$="w" or d$="go w") and s%(p%,4)>0  then p%=s%(p%,4):k=1
820 if k=0 and (b$="n" or b$="s" or b$="e" or b$="w") then print"I can't":k=1
830 if c$="get" or c$="tak" then k=1:gosub 1070
840 if c$="inv" then k=1:gosub 1320
850 if c$="dro" or c$="lea" then k=1:gosub 1350
860 if c$="hel" then k=1:print"I'm as puzzled as you are."
870 if c$="exa" then k=1:gosub 1660
880 if c$="sco" then print"What do you think this is...a game ?":k=1
890 if c$="eat" or c$="dri" then print"I have no provisions!":k=1
900 if c$="bla" or c$="bur" or c$="sho" or c$="kil" then k=1:gosub 1720
910 if c$="swi" then k=1:gosub 1770
920 if c$="ins" then k=1:gosub 1790
930 if c$="in" or d$="go i" then k=1:gosub 1830
940 if c$="out" or d$="go o" then k=1:gosub 1860
950 if c$="up" or d$="go u" then k=1:gosub 1890
960 if c$="dow" or d$="go d" then k=1:gosub 1920
970 if c$="thr" then k=1:gosub 1950
980 if c$="tie" then k=1:gosub 2020
990 if c$="cli" then k=1:gosub 2070
1000 if c$="rub" or c$="wea" then k=1:gosub 2100
1010 if c$="men" or c$="rep" then k=1:gosub 2140
1020 if c$="fil" then k=1:gosub 2180
1030 if c$="use" then gosub 2250
1040 loop until s%=10
1050 scnclr:print"■ Well Done. You have repaired your "
1060 print" ship and have flown to safety.":end
1070 gosub 1570:if l%<1 then print"I can't see a ";l$:return
1080 e%=0:for h=1 to 20:if b%(h)=p% and b%(n%(r))=p% then e%=1
1090 next:if e%=0 then return
1100 if r=3 then print"It's too heavy to lift!":return
1110 if r=4 or r=19 then print"Don't be stupid!":return
1120 if r=5 or r=15 then print"Do you want to get me killed ?":return
1130 if r=6 then print"What a silly suggestion!":return
1140 if r=1 then x$="The jelly is alive and suffocates me.":gosub 1610
1150 if r=7 and aq<1 then x$="He wakes up and attacks me":gosub 1610
1160 if r=2 then aa=1
1170 if r=7 then ab=1
1180 if r=8 then ac=1
1190 if r=9 then ad=1
1200 if r=10 then ae=1
1210 if r=11 then af=1
1220 if r=12 then ag=1
1230 if r=13 then print"I can't carry the tank!":return
1240 if r=14 then aj=1
1250 if r=16 then ak=1
1260 if r=17 then al=1
1270 if r=18 then am=1
1280 if r=20 then an=1
1290 e%=0:for d=1 to 4:if v$(d)="" then v$(d)=g$(n%(r)):e%=1:d=5
1300 next:if e%=0 then print"Sorry my hands are full.":return
1310 b%(n%(r))=0:return
1320 e=0:print"I am carrying :-■":for x=1 to 4:if v$(x)<>"" then printv$(x):e=1
1330 next:if e=0 then print"not a thing!"
1340 print:return
1350 gosub 1570:if l%<>1 then print"I can't see a ";l$:return
1360 e%=0:for x=1 to 4:if v$(x)=g$(n%(r)) then v$(x)="":e%=1
1370 next:if e%<1 then print"I'm not carrying it!":return
```

RED ALERT!

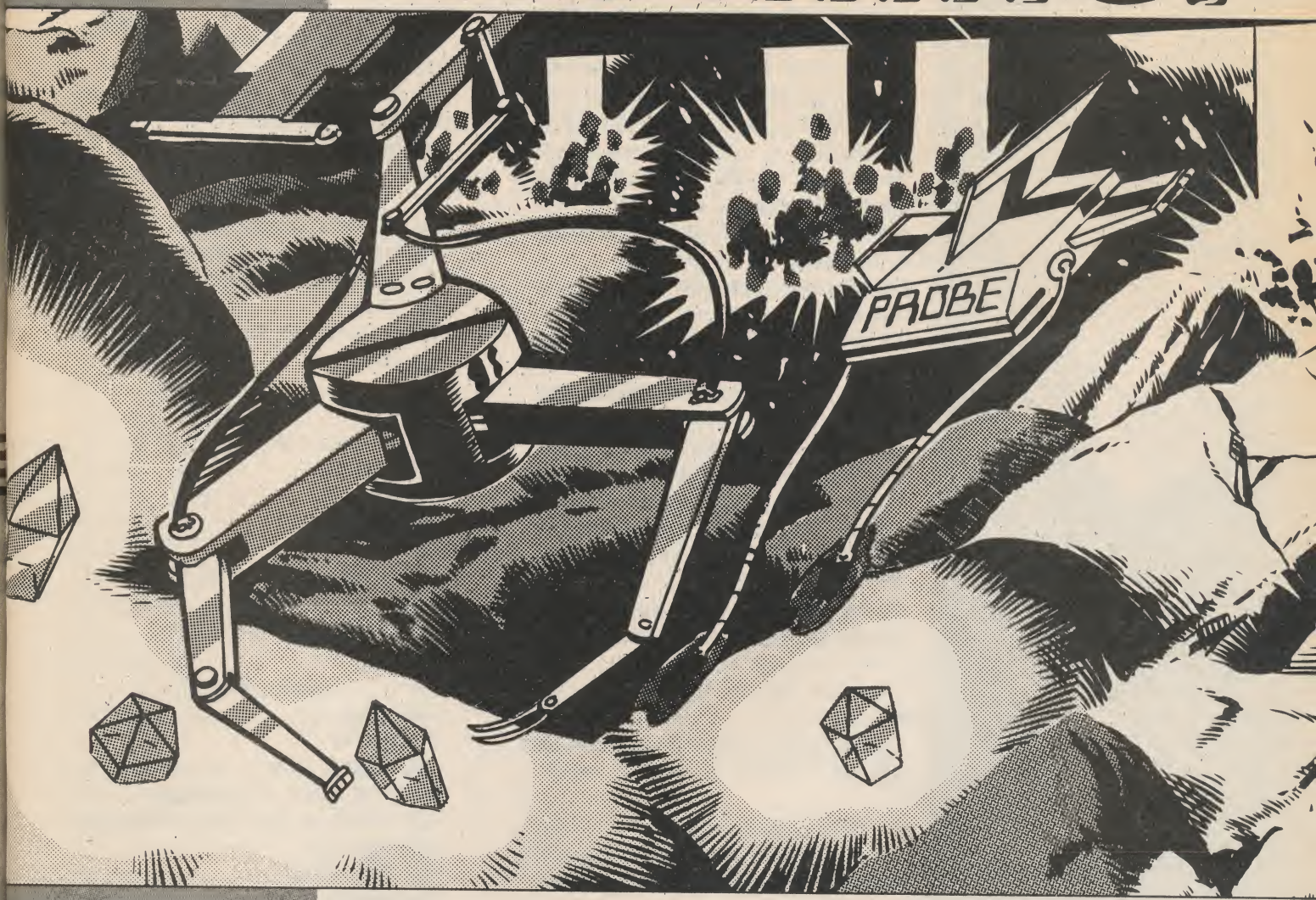
```
1380 if r=10 and p%=6 then q$(6)=q$(6)+" A  plank crosses the river"!s%(6,4)=5
1390 if r=10 and p%=6 then return
1400 if p%=18 and r=7 then q$(18)="at the entrance to a large building"
1410 if p%=18 and r=7 then print"The door opens"!s%(18,4)=19!return
1420 b%(n%(r))=p%
1430 if r=2 then aa=0
1440 if r=7 then ab=0
1450 if r=8 then ac=0
1460 if r=9 then ad=0
1470 if r=10 then ae=0
1480 if r=11 then af=0
1490 if r=12 then ag=0
1500 if r=13 then ah=0
1510 if r=14 then aj=0
1520 if r=16 then aK=0
1530 if r=17 then al=0
1540 if r=18 then am=0
1550 if r=20 then an=0
1560 return
1570 l$=""!xx=instr(z$," ")!l$=right$(z$,len(z$)-xx)!r=0!l%=0
1580 if len(l$)<2 then return
1590 for h=1 to 20!if left$(n$(h),len(l$))=l$ then l%=1!r=h
1600 next!return
1610 scnclr!print x$!print!print!print"■You idiot. You've got me Killed!"
1620 print!print!print"■Do you want another game <y/n> ?"
1630 getKey a$!if a$="y" then run
1640 if a$="n" then print!print!print"Goodbye. ThanK's for playing."!end
1650 goto 1630
1660 gosub 1570!if r<>4 then print"I don't see anything special."!return
1670 if ar=1 then 1690
1680 print"There is a hole in the side of the ship where the aliens shot it."
1690 if s%>7 then return
1700 print"The fuel tanKs are empty and the crystalwarp drive needs a new crysta
l."
1710 return
1720 if p%=4 and aa<>1 then x$="The triffid attacKs me"!gosub 1610
1730 if p%=4 then print"The triffid burns up"!s%(4,2)=7!q$(4)=left$(q$(4),21)
1740 if p%=4 then return
1750 if p%=10 then x$="The Blodgat attacKs me!"!gosub 1610
1760 print"That's a stupid idea!"!return
1770 if p%>6 or p%<5 then print"not here!"!return
1780 x$="The river is deadly poisonous!"!gosub 1610
1790 if p%<>1 then print"I can't do that here!"!return
1800 if am<1 then print"I haven't got the crystal!"!return
1810 for x=1 to 4!if v$(x)=g$(18) then v$(x)=""
1820 next!g$(19)="a warp drive crystal sitting in a socKet"!s%=s%+4!return
1830 if p%=9 then p%=10!return
1840 if p%=15 then p%=16!return
1850 print"Sorry"!return
1860 if p%=16 then p%=15!return
1870 if p%=10 then p%=9!return
1880 print"Sorry"!return
1890 if p%=12 then print"How ?"!return
1900 if p%=21 then p%=22!return
1910 print"not here!"!return
1920 if p%=13 then x$="I slip and breaK my necK"!gosub 1610
1930 if p%=22 then p%=21!return
1940 print"Sorry"!return
1950 if p%<>12 then print"not here!"
1960 if ad<1 then print"no rope!"!return
1970 if ap<1 then print"The rope falls back"!return
1980 if ap=2 then return
1990 print"The rope catches on the tree above."!ap=2
2000 for x=1 to 4!if v$(x)=g$(9) then v$(x)=""
2010 next!return
2020 if ad<1 or af<1 then print"not yet!"!return
2030 if ap>0 then return
2040 ap=1!for x=1 to 4!if v$(x)=g$(11) then v$(x)=""
2050 if v$(x)=g$(9) then v$(x)=g$(9)+" with a hooK attached"!g$(9)=v$(x)
2060 next!ap=1!return
2070 if p%<>12 then print"Not here!"!return
2080 if ap<2 then x$="I try to climb but breaK my neck!"!gosub 1610
2090 p%=13!return
2100 gosub 1570!if r=14 and aj=1 then print"They're too small!"!return
2110 if ac<1 then print"not yet"!return
2120 if p%<9 or p%>10 then print"There isn't much point in that!"!return
2130 aq=1!print"I wear the vanishing cream and disappear"!return
2140 if p%<>1 then print"not here"!return
2150 if aK<1 then print"What with ?"!return
2160 if al<1 then print"I have the metal, but no tools!"!return
2170 s%=s%+3!print"I fix the hole in the ship."!ar=1!return
2180 if p%=1 and at=1  then s%=s%+3!print"I fill the fuel tanKs!"!return
2190 if p%=1 then return
2200 if p%<>23 then print"Not here!"!return
2210 if ag<>1 then print"I have no can!"!return
2220 at=1!for x=1 to 4!if v$(x)=g$(12) then v$(x)="a full can"!g$(12)=v$(x)
2230 next
2240 return

2250 if an<1 then print"I don't have the jetpacK!"!return
2260 print"The jetpacK fires!"
2270 if p%>14 then p%=1!return
2280 p%=23!return
2290 KK%=KK%+1!if KK%>2 then x$="The blodgat attacKs me!"!gosub 1610
2300 if aj=0 then return
2310 if aj=1 then au=1!print"The blodgat takes the goggles and lets  me pass!"
2320 for x=1 to 4!if v$(x)=g$(14) then v$(x)=""
2330 next!g$(15)="a smiling blodgat"!return

ready.
```

BBC

the miner



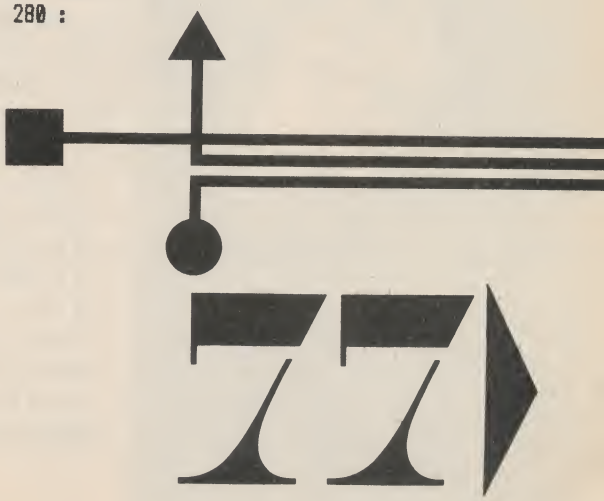
E. McPherson

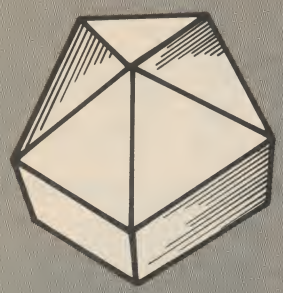
This game is about 7K long and will run on a model B, model A (32K) (any operating system) or an Electron.

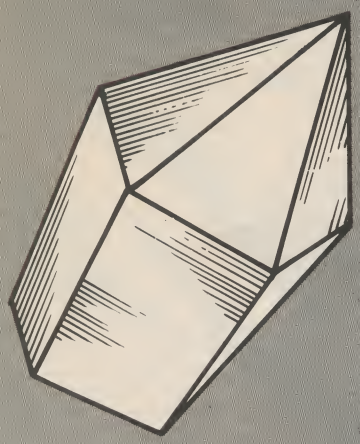
In this game you are a coal miner working down the pit and your job is to try and collect coal from the bottom of the shaft, and then travel through the maze of shafts to the surface, which is then added to your reserves.

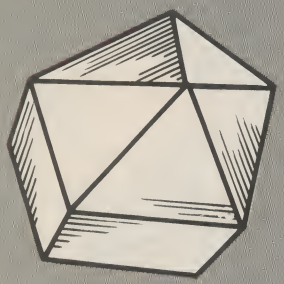
However, your progress of moving coal is hindered by a picket who moves blockades around the maze to try and stop you. Also he chases you and if he catches you your reserves will fall rapidly until you escape. Luckily you have a weapon against him, you can drop obstacles which if he comes across them he will stop at for a certain time, you are allowed five flags on the screen at any one time.

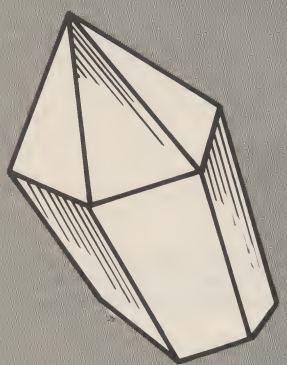
```
  10 REM ********************************
  20 REM ***        The Miner          ***
  30 REM ***   Written and designed    ***
  40 REM ***           by              ***
  50 REM ***     James McPherson       ***
  60 REM ********************************
  70 MODE7
  80 PROCintro
  90 MODE2
 100 VDU 23;8202;0;0;0;
 110 DIM B%(5,1)
 120 PROCsetup
 130 PROCmazedraw
 140 SC%=0
 150 T%=0
 160 PROClevel(450)
 170 PLOT 69,900,YL%+28
 180 VDU 5:MOVE 128,56+YL%:PRINT;"Reserv
es:";:VDU 4
 190 PROCsetup
 200 FOR R%=1 TO 5
 210 PROCchangeblock
 220 NEXT
 230 PROCmove
 240 PROCminermove:A=GET
 250 GOTO 240
 260 END
 270 MODE2
 280 :
```







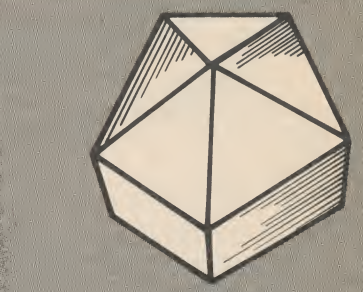


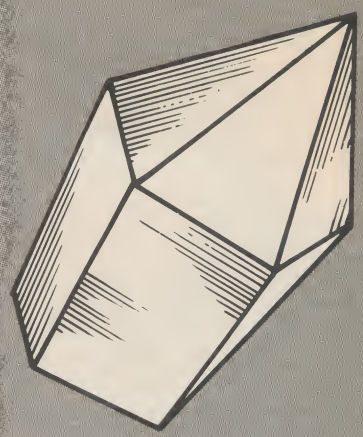


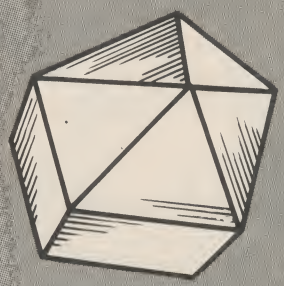
```
  290 :
  300 DEF PROCsetup
  310 VDU4:COLOUR 11:PRINT TAB(2,0);"SCOR
E="
  320 YL%=900
  330 G%=0:FL%=0:NF%=0
  340 XS%=64:YS%=14*32-4
  350 XS1%=64:YS1%=0
  360 VDU 5:GCOL 3,6
  370 MOVE XS%,YS%:VDU 235:VDU4
  380 ENVELOPE 1,10,4,20,50,3,4,5,126,0,0
,-30,126,126
  390 ENVELOPE 2,1,100,-200,100,30,30,30,
126,0,0,-1,126,126
  400 ENVELOPE 3,3,-22,-16,-3,5,8,10,126,
0,0,-10,126,126
  410 VDU 19,12,4,0,0,0,19,13,4,0,0,0,19,
14,4,0,0,0
  420 VDU 23,225,96,96,64,96,64,64,160,16
0
  430 VDU 23,255,255,255,255,255,255,255,
255,255
  440 VDU 23,226,8,4,10,16,0,0,0,0
  450 VDU 23,227,0,0,0,1,15,1,0,0
  460 VDU 23,228,0,0,0,0,16,10,4,8
  470 VDU 23,229,0,0,0,0,0,255,170,85
  480 VDU 23,230,0,0,0,3,3,0,0,0
  490 VDU 23,231,0,0,0,24,24,0,0,0
  500 VDU 23,232,0,0,0,192,192,0,0,0
  510 VDU 23,233,0,96,96,64,121,73,175,16
9
  520 VDU 23,234,0,96,96,64,127,79,175,16
9
  530 VDU 23,235,24,60,24,0,126,24,24,102
  540 VDU 23,236,129,36,102,24,24,102,36,
129
  550 VDU 23,240,26,61,26,4,123,24,24,102
  560 FLAG$=CHR$5+CHR$18+CHR$0+CHR$1+CHR$
255+CHR$8+CHR$18+CHR$0+CHR$3+CHR$236+CHR$
4
  570 ALFRED$=CHR$235
  580 MAN$=CHR$233
  590 DIG$=CHR$5+CHR$18+CHR$0+CHR$5+CHR$2
25+CHR$8+CHR$18+CHR$0+CHR$12+CHR$226+CHR$
8+CHR$18+CHR$0+CHR$13+CHR$227+CHR$8+CHR$1
8+CHR$0+CHR$14+CHR$228+CHR$4
  600 PB$=CHR$5+CHR$18+CHR$0+CHR$6+CHR$22
9+CHR$8+CHR$18+CHR$0+CHR$12+CHR$230+CHR$8
+CHR$18+CHR$0+CHR$13+CHR$231+CHR$8+CHR$18
+CHR$0+CHR$14+CHR$232+CHR$4
  610 BELT$=PB$+PB$+PB$+PB$
  620 MOVE 24*32,144:PRINT BELT$;DIG$;
  630 MOVE 24*32,96:PRINT BELT$;DIG$;
  640 C%=12:C1%=14
  650 RESTORE 1070
  660 VDU 5
  670 GCOL 0,7
  680 FOR Q%=1 TO 5
  690 FOR W%=1 TO (6-Q%)
  700 MOVE 23*32-W%*24+16,Q%*12+72:VDU 23
1
  710 NEXT:NEXT
  720 VDU 4
  730 COLOUR 6
  740 PRINT TAB(13,5);CHR$255
  750 COLOUR 1:PRINT TAB(13,4);CHR$255
  760 GCOL 0,7:MOVE 1280,YL%:DRAW 0,YL%:D
RAW 0,YL%+22:DRAW 1280,YL%+22
  770 ENDPROC
  780 :
  790 :
  800 DEF PROCminermove
  810 VDU 19,C%,7,0,0,0,19,C1%,4,0,0,0
  820 C1%=C%
  830 C%=C%+1
  840 IF C%=15 THEN C%=12
  850 ENDPROC
  860 :
  870 :
  880 DEF PROCmazedraw
  890 X%=0:Y%=6
  900 REPEAT
  910 READ R%
  920 FOR Q%=1 TO R%
  930 COLOUR 4:PRINT TAB(X%,Y%);CHR$255;
  940 X%=X%+1
  950 IF X%=21 THEN Y%=Y%+1:X%=1
  960 NEXT
  970 IF Y%=30 THEN 1040
  980 COLOUR 6
  990 READ R%
 1000 FOR Q%=1 TO R%
 1010 PRINT TAB(X%,Y%);CHR$255;
 1020 X%=X%+1:IF X%=20 THEN Y%=Y%+1:X%=0
 1030 NEXT
 1040 UNTIL Y%=30
 1050 ENDPROC
 1060 :
 1070 DATA 12,3,6,10,1,7,2,1,5,1,2,1,2,1,
4,1,2
 1080 DATA 5,1,2,1,1,2,1,3,1,7,1,2,1,1,5,
1,1,7,2,1,2,8,1,4
 1090 DATA 3,2,1,10,1,3,1,2,1,1,11,3,2,1,
1,2,2,9,1,2,1,3,2,2,1,7,1,3,2,4,6,4,2,3
 1100 DATA 1,4,1,4,2,2,1,1,1,2,2,4,1,5,3,
2,1,2,1,2,4,4,2,1,1,2,1,2,4,2,1,2,3,2,1,2
,1,5
 1110 DATA 1,2,4,4,1,2,1,2,4,2,1,2,1,2,3,
2,1,2,1,5,1,2,1,7,1,2,1,5,1,2,1,7,1,2,1,1
,16,2
 1120 DATA 1,1,1,1,1,15,1,1,1,1,1,3,3,9,1
,1,1,1,1,2,4,9,3,1,7,28
 1130 :
 1140 :
 1150 DEF PROCmove
 1160 TIME=0
 1170 VDU 5
 1180 X%=16*32:Y%=X%-4
```

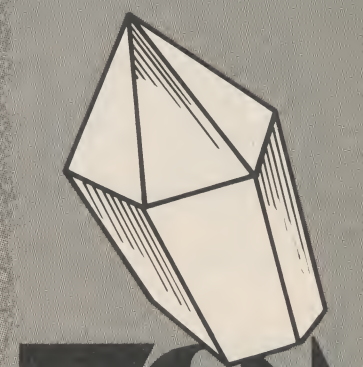
```
 1190 GCOL 3,17:MOVE X%,Y%:PRINT ;MAN$;
 1200 REPEAT
 1210 G%=G%+1
 1220 IF (G% MOD 30)=1 THEN R%=RND(5):PRO
Cchangeblock
 1230 IF (G% MOD 20)=1 THEN PROClevel(-10
)
 1240 IF TIME>25 THEN TIME=0:PROCminermov
e
 1250 X1%=X%:Y1%=Y%
 1260 X%=X%-INKEY(-67)*64+INKEY(-98)*64
 1270 Y%=Y%+INKEY(-105)*32-INKEY(-73)*32
 1280 PO%=POINT(X%,Y%)
 1290 IF PO%=1 THEN PROCunload
 1300 IF PO%=3 THEN 1320
 1310 IF PO%<>6 THEN X%=X1%:Y%=Y1%
 1320 IF PO%=7 THEN PROCloadcoal
 1330 GCOL 3,17
 1340 MOVE X1%,Y1%
 1350 PRINT ;MAN$;
 1360 IF INKEY(-1) THEN PROCflag
 1370 PROCmovealfred
 1380 GCOL 3,17
 1390 MOVE X%,Y%
 1400 PRINT ;MAN$;
 1410 UNTIL 0
 1420 :
 1430 :
 1440 DEF PROCchangeblock
 1450 VDU 4
 1460 COLOUR 6
 1470 IF B%(R%,0)<1 THEN 1490
 1480 PRINT TAB(B%(R%,0),B%(R%,1));CHR$25
5
 1490 B%(R%,0)=RND(18):B%(R%,1)=RND(20)+5
 1500 XB%=B%(R%,0)*64
 1510 YB%=(31-B%(R%,1))*32
 1520 IF POINT(XB%,YB%)<>6 THEN GOTO 1490
 1530 COLOUR 2
 1540 PRINT TAB(B%(R%,0),B%(R%,1));CHR$25
5
 1550 VDU 5
 1560 ENDPROC
 1570 :
 1580 :
 1590 DEF PROCloadcoal
 1600 IF MAN$=CHR$234 THEN ENDPROC
 1610 MAN$=CHR$234
 1620 SOUND 2,2,150,1
 1630 ENDPROC
 1640 :
 1650 :
 1660 DEF PROCunload
 1670 IF MAN$=CHR$233 THEN ENDPROC
 1680 MAN$=CHR$233
 1690 PROClevel(75)
 1700 T%=T%+300
 1710 VDU 4:COLOUR 9:PRINT TAB(8,0);T%:VD
U 5
 1720 SOUND 2,2,0,1
 1730 ENDPROC
 1740 :
 1750 :
 1760 DEF PROCmovealfred
 1770 Z%=0
 1780 HX%=XS%>X%:HY%=YS%>Y%
 1790 GCOL 3,6
 1800 MOVE XS%,YS%:PRINT ;ALFRED$;
 1810 IF X%=XS% AND Y%=YS% THEN MAN$=CHR$
233:PROClevel(-25):SOUND 3,3,150,1:GOTO 1
950
 1820 IF FL%>0 THEN XS%=XS%+XS1%:YS%=YS%+
YS1%:GOTO 1880
 1830 IF YS1%=0 AND HY% AND POINT(XS%+16,
YS%-48)<>4 THEN YS1%=-32:XS1%=0:GOTO 1870
 1840 IF YS1%=0 AND HY%=0 AND POINT(XS%+1
6,YS%+16)<>4 THEN YS1%=32:XS1%=0:GOTO 187
0
 1850 IF XS1%=0 AND HX% AND POINT(XS%-16,
YS%-16)<>4 THEN XS1%=-64:YS1%=0:GOTO 1870
 1860 IF XS1%=0 AND HY%=0 AND POINT(XS%+1
00,YS%-16)<>4 THEN XS1%=64:YS1%=0
 1870 XS%=XS%+XS1%:YS%=YS%+YS1%
 1880 PO%=POINT(XS%+16,YS%-16)
 1890 IF PO%=6 OR PO%=2 OR PO%=7 THEN 195
0
 1900 IF FL%=20 THEN FL%=0:GCOL 0,6:MOVE
XS%,YS%:VDU 255:XS%=XS%-XS1%:YS%=YS%-YS1%
:GCOL 3,6:ALFRED$=CHR$235:NF%=NF%-1:GOTO
1950
 1910 IF PO%=1 THEN FL%=FL%+1:ALFRED$=CHR
$240:XS%=XS%-XS1%:YS%=YS%-YS1%:GOTO 1950
 1920 IF Z%=1 THEN YS1%=YS1%*-1:XS1%=XS1%
*-1:Z%=0:GOTO 1870
 1930 IF YS1%=0 THEN XS%=XS%-XS1%:YS1%=(Y
S%<Y%*2+1)*32:XS1%=0:Z%=1:GOTO 1870
 1940 IF XS1%=0 THEN YS%=YS%-YS1%:XS1%=(X
S%<X%*2+1)*64:YS1%=0:Z%=1:GOTO 1870
 1950 GCOL 3,6:MOVE XS%,YS%:PRINT ;ALFRED
$;
 1960 ENDPROC
 1970 :
 1980 :
 1990 DEF PROCflag
 2000 IF POINT(X%+32,Y%-8)<>6 THEN ENDPRO
C
 2010 IF NF%=5 THEN ENDPROC
 2020 NF%=NF%+1
 2030 MOVE X%,Y%
 2040 PRINT ;FLAG$;
 2050 SOUND 1,1,50,1
 2060 VDU 5
 2070 ENDPROC
 2080 :
 2090 :
 2100 DEF PROClevel(AS%)
 2110 AS%=AS%*2
 2120 IF AS%>0 THEN GCOL 0,2 ELSE GCOL 0,
0
```

BBC









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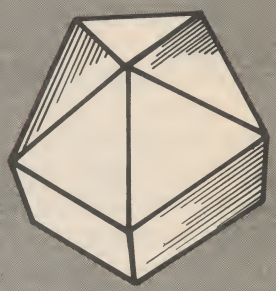
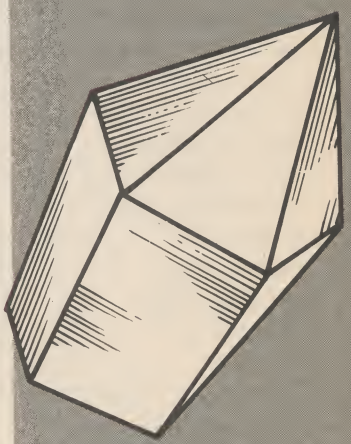
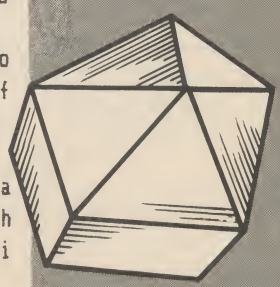
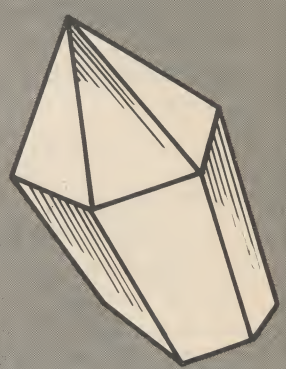
```
2130 FOR W%=1 TO 4
2140 MOVE SC%,YL%+W%*4:PLOT 13,SC%+AS%,Y
L%+W%*4
2150 NEXT
2160 SC%=SC%+AS%
2170 IF SC%<0 THEN PROCend
2180 ENDPROC
2190 :
2200 :
2210 DEF PROCend
2220 RESTORE 2510
2230 FOR W=1 TO 2500:NEXT
2240 *FX15,0
2250 VDU 4
2260 PRINT TAB(3,30);"Press any key";:A=
GET
2270 T%=T%+G%
2280 COLOUR 1:COLOUR 131
2290 READ Q$:L%=0:P$=""
2300 Q$=Q$+" "
2310 REPEAT
2320 L%=L%+1
2330 P$=P$+MID$(Q$,L%,1)
2340 UNTIL MID$(Q$,L%,1)=" "
2350 PRINT ''TAB((19-LEN(P$))/2);P$;
2360 A=INKEY(30)
2370 IF LEN(P$)<3 THEN 2410
2380 P$=""
2390 R%=RND(6):COLOUR R%:COLOUR 129+R%
2400 GOTO 2310
2410 IF T%=0 THEN 2450
2420 PRINT;T%;
2430 T%=0
2440 GOTO 2290
2450 FOR W=1 TO 6000:NEXT
2460 CLS
2470 *FX 15,0
2480 PRINT TAB(0,10);"AGAIN? <Y/N>";:A$=
GET$
2490 IF A$="Y" THEN RUN ELSE CLS:END
2500 ENDPROC
2510 DATA Unfortunately the pit had to b
e closed due to lack of reserves however
you have earned yourself  ,redundancy pay
.
2520 :
2530 :
2540 DEF PROCintro
2550 RESTORE 2830
2560 FOR Q%=0 TO 1
2570 PRINT TAB(10,Q%);CHR$141;CHR$131;"T
he Miner"
2580 NEXT
2590 VDU 28,0,23,39,3
2600 REPEAT
2610 READ Q$
2620 IF Q$="NO MORE" THEN 2800
2630 R%=RND(7)+128
2640 PRINT
2650 IF Q$="END" THEN PRINT '''TAB(5);"P
ress any key to continue";:A=GET:CLS:GOTO
2610
2660 Q$=Q$+" "
2670 L%=0
2680 REPEAT
2690 P$=MID$(Q$,L%,38)+"G"
2700 IF L%>LEN(Q$) THEN 2790
2710 IF L%>LEN(Q$)-39 THEN L%=(LEN(Q$)-3
9)-L% ELSE L%=L%+39
2720 PL%=39
2730 REPEAT
2740 L%=L%-1
2750 PL%=PL%-1
2760 P$=LEFT$(P$,LEN(P$)-1)
2770 UNTIL MID$(P$,PL%,1)=" " OR L%<0
2780 PRINT CHR$(R%);P$
2790 UNTIL L%>LEN(Q$) OR L%<0
2800 UNTIL Q$="NO MORE"
2810 ENDPROC
2820 :
2830 DATA In this game you are a working
 miner trying to maintain your mine reser
ves to stop the mine from being closed do
wn.
2840 DATA You do this by taking coal fro
m a pile at the bottom of the mine your f
ellow miners keep this pile from running
out.
2850 DATA However you have a problem : a
 striking miner is trying to stop you : h
e does this by placing five blockades whi
ch you cannot get past.
2860 DATA END
2870 DATA Also he chases you around the
maze of mine shafts and if he catches up
with you your coal reserves are reduced.
2880 DATA "Luckily for you, you have a w
ay of slowing the striker down, this is t
o drop obstacles which will delay him for
 a few seconds."
2890 DATA Use these obstacle carefully a
s you are only allowed 5 of them in the m
ine at any one time.
2900 DATA END
2910 DATA ********** C O N T R O L S ***
*******,********** Z.......left *********
*,********** X.......right **********,***
******* *.......up **********,**********
 ?.......down **********,**** <SHIFT>...
.drop obstacle ****,END
2920 DATA "NO MORE"
```









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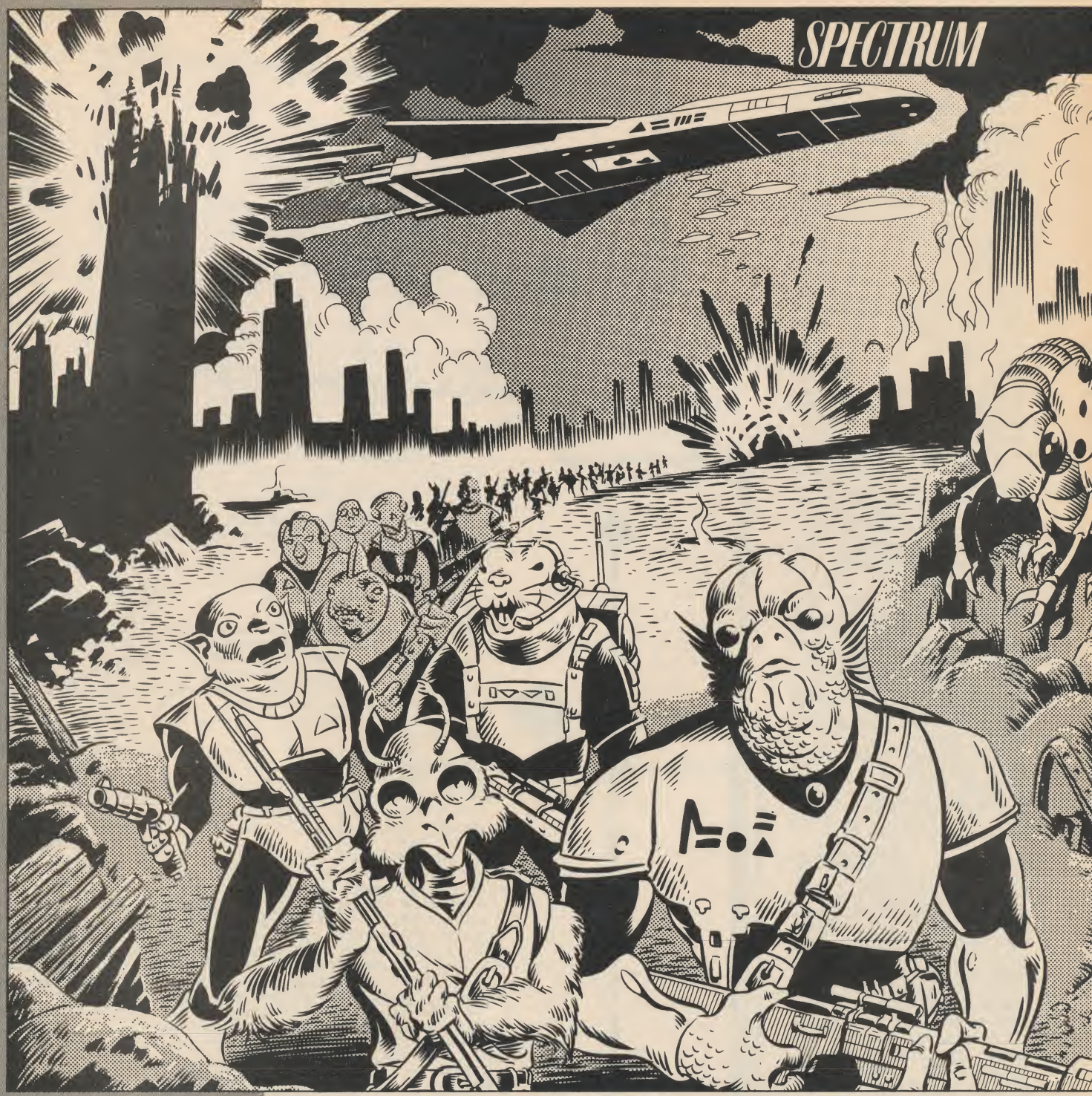

SPACE STATION ALPHA

Adam Manning

Space Station Alpha is a game set in a time about 700 years from now, depending upon the year you are told by the program. The planet Earth has united into one government and is in the process of setting up a small federation of the surrounding solar systems. To make the naming of new planets more logical, Earth

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has been re-named Sol III, Mars is Sol IV etc.

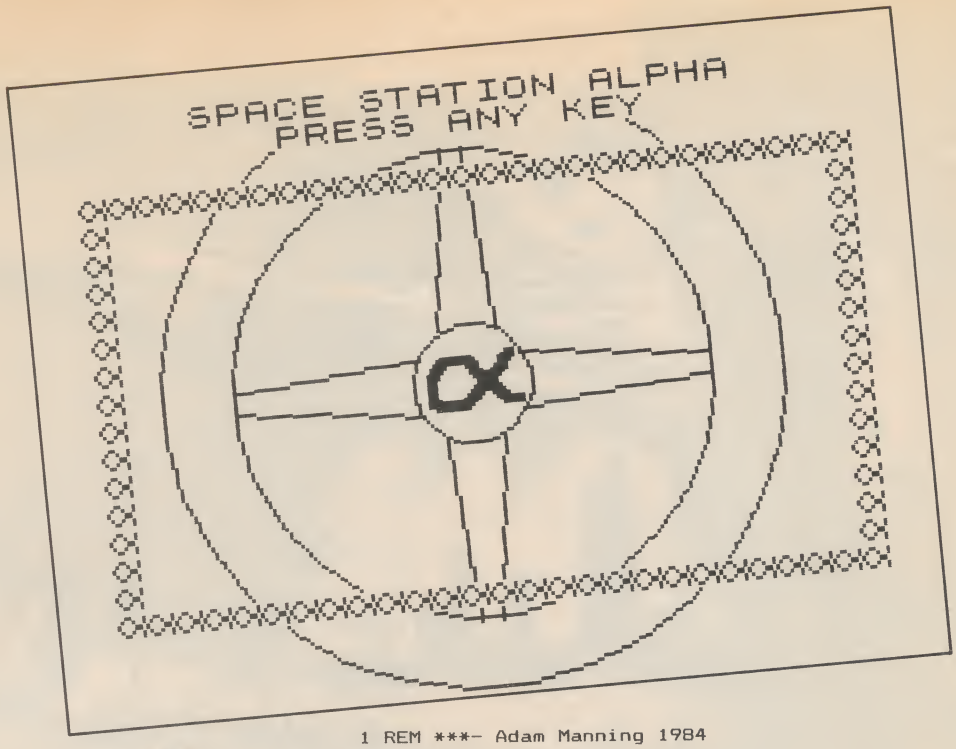
Recently though, things have been going wrong for this promising start for intergalactic man. People from the Centauri system (colonised way back in 2350) have become troublesome, if not to say aggressive. They wish to be the new power in the W.A.S. (Western Alliance of Systems), of which the Sol system (colonised -100,000) is at the moment the predominant member, They have cut off all their trade and communication with the rest of the W.A.S. and several scout ships from the Procyon system (colonised in 2435) have spotted ship years in orbit around Centauri AIV (formerly known as Darcog) manufacturing large war-ships, similar in design to the familiar Harmis stormer ship of Eridani system (colonised in 2410, one of the co-founders along with the Sol and Centauri systems in 2290).

In readiness for the attack from the Centauri system, the Sol system set up the highly-secret Omega, series of space stations. These ranged from the first and nearest to Sol III, Space Station Alpha made in 2455 to the newest; Space Base Tau set near Sol VIII in 2490.

The attack began, and the Centaurians swept through the outer fringes of the Sol system towards Sol III, destroying Space Station after Space Base.

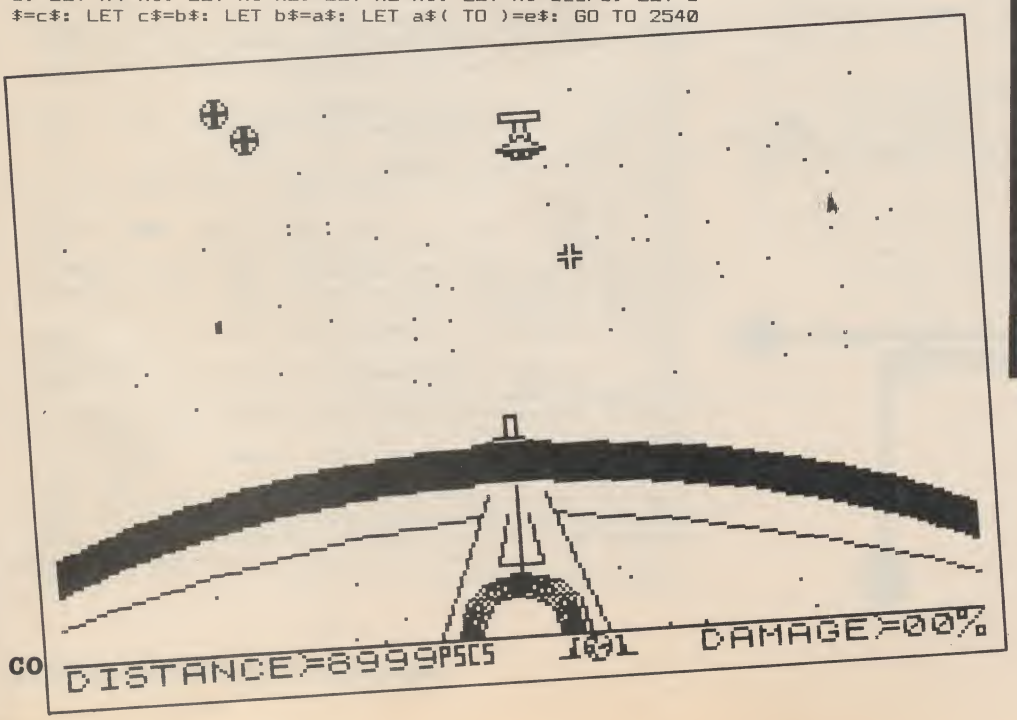
They completely anhilliated Sol VI and its surrounding satellites and several space stations. The only one left is yours, Space Station Alpha, after which this game is named. You must defend Sol III, by warding off their attack. After a certain time, the Centaurians will give up. This is because they are a poor planet, starved by their economic sanctions against the rest of the W.A.S., and have a few of their star stormers.

If you can survive the onslaught for that time, you will have saved Earth. Complete game play instructions are included in the program.




```
  1 REM ***- Adam Manning 1984
-***
  2 REM **********************
  3 REM **********************
  4 REM **                    **
  5 REM **Space Station Alpha**
  6 REM **        by          **
  7 REM **   Adam Manning     **
  8 REM **                    **
  9 REM **********************
 10 REM **********************
 11 RANDOMIZE : OVER 0: INVERSE 0: FLASH 0: BRIGHT 0:
LET sound=1: POKE 23609,84: DEF FN i(x)=INT (x+.5): DEF
 FN r(x)=INT (RND*x+1): LET year=2500+FN r(500)
 13 LET k$="k": GO SUB 9900
 16 REM **- Main loop of program -**
 20 GO SUB 9e+3
 25 GO SUB 8.5e+3
 30 GO SUB 9.99e+3
 35 GO SUB 7.9e+3
 40 GO SUB 7e+3
 45 GO SUB 6.9e+3: GO SUB 6e+3
 50 GO SUB 6.9e+3
 55 GO SUB 6.5e+3
 60 GO SUB 5e+3
 65 GO SUB 6.95e+3: GO TO 45
 70 REM **- Data for graphics (A-S) -**
 75 DATA 0,63,32,63,2,2,2,4,0,252,4,252,64,64,64,32,5,
6,24,96,127,29,7,0,160,96,24,6,254,184,224,0
 80 DATA 0,4,10,55,63,31,15,63,0,0,0,64,80,112,240,224
,127,31,127,63,31,22,2,0,240,224,192,192,224,32,0,0
 85 DATA 40,40,238,0,238,40,40,0,60,90,153,255,255,153
,90,60,64,32,31,0,31,32,64,0,0,238,168,238,130,130,142,
0,0,238,136,142,130,130,238,0
 90 DATA 0,6,4,4,12,12,126,0,60,114,145,231,173,227,82
,60,0,96,32,32,48,48,126,0
 95 DATA 225,162,228,8,16,39,69,135,0,0,0,0,0,0,0,0,0,
49,73,134,134,73,49,0
 500 REM **- SET UP HIGH SCORES -**
 505 DIM A$(10): DIM B$(10): DIM C$(10): DIM D$(10): LE
T A$( TO )=".........": LET B$( TO )=".........": LET
 c$( TO )=".........": LET d$( TO )=".........": LET
h1=0: LET h2=0: LET h3=0: LET h4=0
 510 REM **- SET-UP GRAPHICS -**
 520 FOR a=USR "a" TO USR "s"+7: READ val: POKE a,val:
BEEP .001,val/4.25: NEXT a
 530 RETURN
1000 REM **- TIME UP! -**
1001 GO SUB 1100
1002 BORDER 1: PAPER 1: INK 7: BRIGHT 1: CLS
1005 PLOT 20,150: DRAW 5,20: DRAW -10,0: DRAW 20,0: PLO
T 40,150: DRAW 5,20: PLOT 50,150: DRAW 5,20: DRAW 5,-5:
 DRAW 5,5: DRAW -5,-20
1010 PLOT 70,150: DRAW 5,20: DRAW 10,0: PLOT 70,150: DR
AW 10,0: PLOT 72,160: DRAW 10,0
1015 PLOT 128,150: DRAW 0,-50: DRAW 25,0: DRAW 0,50: PL
OT 170,150: DRAW 25,0: DRAW 0,-25: DRAW -25,0: DRAW 0,2
5: DRAW 0,-50
1020 PLOT 205,150: DRAW 0,-40: PLOT 205,100: DRAW 0,5:
PLOT 202,103: DRAW 6,0
1025 FOR a=-25 TO 40: BEEP .01,a-5: BEEP .01,a: BEEP .0
1,a+6: NEXT a
1030 FOR a=3 TO 6: LET m$=p$(3,a): LET row=16: LET col=
0: GO SUB 8900: PAUSE 25: NEXT a
```

```
1035 FOR a=10 TO 0 STEP -1.5: BEEP .1,a: BEEP .1,-a: NE
XT a
1040 GO SUB 8490: GO TO 2500
1100 FOR a=7 TO 0 STEP -1: PRINT AT 21,13; INK a; OVER
1;"          ": BEEP .01,a-5: BEEP .01,a: BEEP .01,a+6:
 NEXT a
1110 RETURN
1399 STOP
1400 REM **- CHECK IF HE'S HIT SPACESHIP -**
1405 IF (curcol=spacol AND currow=sparow) OR (curcol=sp
acol AND currow=sparow+1) OR (curcol=spacol+1 AND curro
w=sparow) OR (curcol=spacol+1 AND currow=sparow+1) THEN
  GO SUB 5500: RETURN
1410 RETURN
1500 REM **- SPACE STATION DESTROYED! -**
1502 GO SUB 1530
1505 BORDER 2: PAPER 2: INK 6: BRIGHT 1: CLS
1510 PRINT AT 0,5;"This message arrives at";AT 1,13;"So
l III.";AT 2,0;"It was sent from Mars communica-tion c
entre (Sol IV)."
1515 INK 5: FOR a=1 TO 6: LET m$=p$(2,a): LET row=a+5:
LET col=0: GO SUB 8900: NEXT a
1520 INK 4: PRINT '''TAB 4;"At which point,Sol IV was"'
TAB 3;"destroyed by the Centaurian";TAB 13;"Craft."
1525 GO SUB 3900: FOR a=40 TO -5 STEP -1: BEEP .01,a-5:
 BEEP .01,a-2.5: BEEP .01,a: BEEP .01,a+3: BEEP .01,a+6
: NEXT a: GO SUB 8490: GO TO 2500
1530 FOR a=0 TO 1 STEP .05: BEEP .01,-25-a: BEEP .01,a:
 NEXT a: FOR a=1 TO 20: BEEP .01,0: BEEP .01,-25: NEXT
a
1532 FOR a=1 TO 15: PRINT AT FN r(8)+11,INT (RND*31); I
NK INT (RND*3+3); PAPER 8;CHR$ 148;CHR$ 149: BEEP .01,-
10+RND: NEXT a
1535 FOR a=1 TO 50: INK INT (RND*3+3): PLOT 128,16: DRA
W INT (RND*255)-128,INT (RND*80): BEEP .01,-25+RND*5: N
EXT a
1540 RETURN
2000 REM **- SPACECRAFT DOCKED! -**
2005 FOR a=1 TO 5
2010 LET Which=FN r(3)
2015 IF which=1 THEN  FOR n=-5 TO 5 STEP 2: BEEP .01,n:
 NEXT n
2020 IF which=2 THEN  FOR n=15 TO 5 STEP -2: BEEP .01,n
: NEXT n
2025 IF which=3 THEN  FOR b=1 TO 4: FOR n=5 TO -5 STEP
-1: BEEP .01,n: NEXT n: FOR n=-5 TO 5: BEEP .01,n: NEXT
 n: NEXT b
2030 NEXT a
2040 BORDER 0: PAPER 0: INK 7: BRIGHT 1: CLS
2045 PRINT AT 2,9; INK 0; PAPER 7;"CONSOLE COMPUTER";AT
 4,12; INK 2; PAPER 6;"WARNING!": BEEP .5,-25: FOR a=1
TO 6: LET m$=p$(1,a): LET row=a*2+4: LET col=0: GO SUB
8900: NEXT a
2050 FOR b=1 TO 10: BEEP .02,25: PAUSE 1: NEXT b: GO SU
B 8490: GO TO 2500
2500 REM **- SCORING AND HIGH SCORE TABLE -**
2505 BORDER 3: PAPER 3: INK 7: BRIGHT 1: CLS
2510 LET score=FN i(score): PRINT AT 11,2; FLASH 1; INK
 1; PAPER 7;"You got a score of ": FOR a=0 TO 7: PRINT
AT 11,21; PAPER a; INK 7-a; FLASH 1;score: BEEP .01,a:
NEXT a
2515 PRINT AT 13,5; BRIGHT 0; INK 0; PAPER 7;"And a bon
us of ";: LET time=FN i(time): PRINT time: LET score=sc
ore+time: GO SUB 8490
2520 IF score>h1 THEN  LET bo=6: LET u$="_": GO SUB 290
0: LET h4=h3: LET h3=h2: LET h2=h1: LET h1=score: LET d
$=c$: LET c$=b$: LET b$=a$: LET a$( TO )=e$: GO TO 2540
```



SPECTRUM

Hints and Tips

As the space-ships always start off at the top of the screen, and your sight begins at the bottom of the game play area, it is a good idea to press the down key as soon as you start. This will mean that you get to the spaceship faster because if you go off the bottom edge of the screen you re-appear at the top.

Keys

The keys used to control the sight are:

Q-up, A-down, I-left, P-right, O-fire laser, space-fire matter disintergrators, S-turn sound on/off

Matter disintergrators have a choice of blowing up on you. This is because they are under development and is explained fully in the programs instructions.

Scoring

You will get more points for destroying a ship the nearer it is to your space station and the fiercer it is. The ferocity of the space ship is shown by its colour of class. You will get more points for destroying a white class spaceship than a green class. You also get a bonus for how long you survive.

Docking

Once the spaceship has got to the outside rim of your space station it will make a bee-line for your docking portal (the same place as you fire from). If they successfully dock, they will capture Space Station Alpha and your go will be over.

Damage

Every time a Centaurian spacecraft it inflicts a certain amount of damage. This is dependant upon how near it fires to your docking bay (the nearer the more damage). Once Space Station Alpha has taken more than about 95% damage, it will disintegrate and your go will be over.

```
2525 IF score>h2 AND score<=h1 THEN  LET bo=5: LET u$="
:": GO SUB 2900: LET h4=h3: LET h3=h2: LET h2=score: LE
T d$=c$: LET c$=b$: LET b$( TO )=e$: GO TO 2540
2530 IF score>h3 AND score<=h2 THEN  LET bo=4: LET u$="
L": GO SUB 2900: LET h4=h3: LET h3=score: LET d$=c$: LE
T c$( TO )=e$: GO TO 2540
2535 IF score>h4 AND score<=h3 THEN  LET bo=3: LET u$=C
HR$ 143: GO SUB 2900: LET h4=score: LET d$( TO )=e$: GO
 TO 2540
2540 BORDER 0: PAPER 0: INK 7: BRIGHT 1: CLS : LET col=
7
2545 PRINT AT 1,6; INK cl;"The Alpha High Scores": PRIN
T AT 2,0; INK col;CHR$ 144;CHR$ 145;"[illegible]
[illegible]";CHR$ 144;CHR$ 145;AT 3,0;CHR$ 146;CHR$ 147;
"[illegible]";CHR$ 146;CHR$ 147
2550 PRINT AT 8,5; INK col;h1;"   by ";a$;AT 10,5; INK
col;h2;"   by ";b$;AT 12,5; INK col;h3;"   by ";c$;AT 1
4,5; INK col;h4;"   by ";d$
2555 PRINT AT 16,2;"Press any key..": IF INKEY$<>"" THE
N  GO TO 3e+3
2560 LET col=col-1: IF col=0 THEN  LET col=7
2565 BEEP .01,col: BEEP .01,-col: GO TO 2545
2900 BORDER bo: PAPER bo: BRIGHT 1: INK 0: CLS
2905 LET m$="You have managed to get": LET row=2: LET c
ol=2: GO SUB 8900: LET m$="into the high score table.":
 LET row=4: LET col=2:8900
2910 PRINT AT 6,2;"Please type in your name ";AT 8,2;"M
ax 10 characters.": LET row=10: LET col=11: LET limit=1
0: GO SUB 8400: PRINT AT 12,3;"Thank you.": FOR a=1 TO
16: BEEP s(a,1),s(a,2): NEXT a: RETURN
3000 REM **- ANOTHER GO? -**
3005 BORDER 2: PAPER 2: INK 6: BRIGHT 1: CLS
3010 PRINT AT 11,2; FLASH 1; INK 1; PAPER 6;"Do you wan
t another go?";AT 12,2; OVER 1; INK 1; PAPER 6;"++++++++
++++++++++++++++"
3015 BEEP .01,FN r(120)-60
3020 IF INKEY$="y" OR INKEY$="Y" THEN  FOR a=-5 TO 5 ST
EP .5: BEEP .01,a-5: BEEP .01,a: BEEP .01,a+6: NEXT a:
GO TO 20
3025 IF INKEY$="n" OR INKEY$="N" THEN  BORDER 7: PAPER
7: INK 0: CLS : PRINT AT 11,2; FLASH 1;"RUN THE TAPE...
...": FOR a=0 TO 10 STEP .25: BEEP .01,a-5: BEEP .01,a:
NEXT a: RANDOMIZE USR 0
3030 GO TO 3015
3500 REM **- MATTER DISINTERGRATORS -**
3502 IF matters=0 THEN  RETURN
3505 IF damage<=50 THEN  LET pro=50
3510 IF damage>50 THEN  LET pro=damage
3515 LET rating=FN r(100): IF rating<pro THEN  GO SUB 3
800: RETURN
3520 FOR a=0 TO 5: PRINT AT a,0; PAPER 3; OVER 1; INK 8
;"                                ";AT 11-a,0;"
                          ": NEXT a
3525 LET pap=3: GO SUB 5510
3530 FOR a=0 TO 5: PRINT AT a,0; OVER 1; INK 8;"
                            ";AT 11-a,0;"
                 ": NEXT a
3535 PRINT AT olcrrw,olcrcl; OVER 0;" ": LET matters=ma
tters-1: GO TO 5540
3800 REM **- MATTER DISINTERGRATORS BLOW UP -**
3805 FOR a=110 TO 127: INK 2: PLOT a,17: DRAW (127-a)*2
,0,-PI: BEEP .01,-25-RND*5: NEXT a
3810 FOR a=-20 TO -30 STEP -1: BEEP .01,a+5: BEEP .01,a
: BEEP .01,a-6: NEXT a
3815 LET matters=0: INK 7: RETURN
3900 REM **- LINE AROUND -**
3910 INK 8: PLOT 0,0: DRAW 255,0: DRAW 0,175: DRAW -255
,0: DRAW 0,-175
3915 RETURN
4000 REM **- SPACECRAFT FIRING -**
4005 LET x=(spacol+1)*8: LET y=(21-sparow)*8-6
4010 FOR a=0 TO 1: OVER a: PLOT  INK col;x-1,y: DRAW  I
NK col;-2,80-y: PLOT  INK col;x+1,y: DRAW  INK col;2,80
-y: IF a=0 AND sound THEN  BEEP .01,25: BEEP .01,30
4015 IF NOT sound THEN  PAUSE 1
4020 NEXT a
4022 OVER 0
4025 LET harm=FN i((16-ABS (16-spacol))/1.5)
4030 LET damage=damage+harm: IF damage>=100 THEN  GO TO
 1500
4035 IF sound THEN  BEEP .01,harm
4040 RETURN
4500 REM **- SPACE STATION FIRING -**
4505 LET x=curcol*8+4: LET y=(21-currow)*8+4
4510 LET dx=x-127: LET dy=y-80
4515 FOR a=0 TO 1: OVER a: PLOT 127,80: DRAW dx,dy: IF
sound AND a=0 THEN  FOR b=-45 TO 45 STEP 20: BEEP .01,b
: NEXT b
4520 NEXT a
4523 OVER 0
4525 GO SUB 1400
4530 RETURN
5000 REM **- SPACECRAFT MOVING -**
5005 IF RND<prob THEN  GO SUB 4e+3
5010 IF sparow<>10 THEN  GO TO 5050
5012 IF spacol=15 THEN  GO TO 2e+3
5015 IF spacol<15 THEN  LET spacol=spacol+1: RETURN
5020 LET spacol=spacol-1: RETURN
5050 LET distance=distance-speed: LET sparow=FN i(11-(d
istance/909))
5055 LET spacol=spacol+INT (RND*3-1)
5060 IF spacol<0 THEN  LET spacol=0: RETURN
5065 IF spacol>30 THEN  LET spacol=30
5070 RETURN
5500 REM **- DESTROYED A SPACECRAFT! -**
5505 BEEP .0,-25
5507 LET pap=0: GO SUB 5510: GO TO 5540
5510 FOR a=0 TO 10: LET RND=RND: IF RND<.5 THEN  LET in
k=2: REM **- FIRE -**
5515 IF RND>.5 THEN  LET ink=6
5520 PRINT AT sparow,spacol; INK ink; PAPER pap;CHR$ 14
8;CHR$ 149;AT sparow+1,spacol;CHR$ 150;CHR$ 151
5525 IF sound THEN  BEEP .05,-25+RND: BEEP .06,-30+RND*
3
5530 IF NOT sound THEN  PAUSE 6
5535 NEXT a
5537 RETURN
5540 OVER 0: LET speed=speed+25: LET score=score+((10*p
rob)+sparow)+10: PRINT AT sparow,spacol; OVER 0;"  ";AT
 sparow+1,spacol;"  ";AT currow,curcol;" "
5545 GO SUB 7990: LET prob=prob+.025
5550 IF prob>1 THEN  LET prob=1
5552 PAUSE 10
5555 IF sound THEN  FOR a=1 TO 16: BEEP s(a,1)/2,s(a,2)
: NEXT a: FOR a=5 TO 0 STEP -1: BEEP .01,a: NEXT a: FOR
 a=0 TO 15: BEEP .01,a: NEXT a
5557 PAUSE 25
5560 IF NOT sound THEN  PAUSE 97
5575 RETURN
6000 REM **- UPDATE DISPLAY INSTRUMENTS -**
6002 IF RND<.4 THEN  PLOT INT (RND*255),INT (RND*96)+80
6005 IF LEN STR$ distance<>4 THEN  LET num=distance: LE
T y$="0000": GO SUB 6450: GO TO 6007
6006 LET y$=STR$ distance
6007 PRINT AT 20,9;y$
6010 IF LEN STR$ damage=1 THEN  PRINT AT 20,29;"0";dama
ge
6015 IF LEN STR$ damage=2 THEN  PRINT AT 20,29;damage
6020 INVERSE 1: PLOT 105+time,1: DRAW 0,5: INVERSE 0
6021 LET time=time+.25: IF time>78 THEN  GO TO 1e+3
6035 RETURN
6450 REM **- CONVERTING NUMBER TO STRING -**
6455 LET len=LEN STR$ num: LET y$(LEN y$-len TO )=STR$
num: RETURN
6500 REM **- SIGHT MOVING -**
6505 IF k$="j" THEN  GO SUB 6600: GO SUB 6800: GO SUB 6
850: RETURN
6510 IF k$="c" THEN  GO SUB 6700: GO SUB 6800: GO SUB 6
850: RETURN
6512 IF INKEY$="O" OR INKEY$="o" THEN  GO SUB 4500
6515 IF INKEY$="Q" OR INKEY$="q" THEN  LET currow=curro
w-1: GO TO 6525
6520 IF INKEY$="A" OR INKEY$="a" THEN  LET currow=curro
w+1
6525 IF INKEY$="I" OR INKEY$="i" THEN  LET curcol=curco
l-1: GO TO 6535
6530 IF INKEY$="P" OR INKEY$="p" THEN  LET curcol=curco
l+1
6540 GO SUB 6800: GO SUB 6850: RETURN
6600 REM **- KEMPSTON -**
6605 LET stix=IN 31: IF stix=0 THEN  GO TO 6690
6610 IF stix>=16 THEN  GO SUB 4500: LET stix=stix-16
6615 IF stix=8 THEN  LET currow=currow-1: GO TO 6690
6620 IF stix=9 THEN  LET currow=currow-1: LET curcol=cu
rcol+1: GO TO 6690
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6625 IF stix=1 THEN  LET curcol=curcol+1: GO TO 6690
6630 IF stix=5 THEN  LET currow=currow+1: LET curcol=cu
rcol+1: GO TO 6690
6640 IF stix=4 THEN  LET currow=currow+1: GO TO 6690
6645 IF stix=6 THEN  LET currow=currow+1: LET curcol=cu
rcol-1: GO TO 6690
6650 IF stix=2 THEN  LET curcol=curcol-1: GO TO 6690
6655 IF stix=10 THEN  LET curcol=curcol-1: LET currow=c
urrow-1
6690 GO SUB 6800: GO SUB 6850
6695 RETURN
6700 REM **- CURSOR -**
6705 LET q$=INKEY$: IF q$="0" THEN  GO SUB 4500
6710 IF q$="8" THEN  LET curcol=curcol+1: GO TO 6720
6715 IF q$="5" THEN  LET curcol=curcol-1
6720 IF q$="7" THEN  LET currow=currow-1: GO TO 6730
6725 IF q$="6" THEN  LET currow=currow+1
6730 GO SUB 6800: GO SUB 6850
6735 RETURN
6800 REM **- STANDARD KEYS -**
6805 IF INKEY$=" " THEN  GO SUB 3500
6810 IF INKEY$="s" OR INKEY$="S" AND sound=1 THEN  LET
sound=0: RETURN
6815 IF INKEY$="S" OR INKEY$="s" AND sound=0 THEN  LET
sound=1: RETURN
6820 RETURN
6850 IF currow<0 THEN  LET currow=11: GO TO 6860
6855 IF currow>11 THEN  LET currow=0
6860 IF curcol>31 THEN  LET curcol=0: RETURN
6865 IF curcol<0 THEN  LET curcol=31
6870 RETURN
6900 REM **- PRINT SPACE+SIGHTS -**
6901 LET colFN i(prob/.142857142)
6902 LET olsprw=sparow: LET olspcl=spacol: LET olcrrw=c
urrow: LET olcrcl=curcol
6903 IF col=0 THEN  LET col=1
6905 PRINT AT currow,curcol;CHR$ 152: PRINT AT sparow,s
pacol; INK col;CHR$ 144;CHR$ 145;AT sparow+1,spacol;CHR
$ 146;CHR$ 147: RETURN
6949 REM **- RUB -**
6950 PRINT AT st1row,st1col; INK 5;CHR$ 153;AT st2row,s
t2col; INK 6;CHR$ 153;AT olsprw,olspcl;"  ";AT olsprw+1
,olspcl;"  ";AT olcrrw,olcrcl;" ": RETURN
7000 REM **- SET UP SCREEN FOR GAME -**
7005 BORDER 0: PAPER 0: INK 7: BRIGHT 1: CLS
7010 PLOT 0,16: DRAW 255,0: PRINT AT 20,0; INK 6;"DISTA
NCE";CHR$ 154; INK 5;"     ";CHR$ 155;CHR$ 156;"  "; INK
 7;CHR$ 157;CHR$ 158;CHR$ 159;"  "; INK 4;"DAMAGE";CHR$
 154;"  ";CHR$ 160;AT 21,3; INK 7;CHR$ 157;CHR$ 158;CHR
$ 159;"  "; INK 6;"TIME";CHR$ 154;"                ";  INK
7;CHR$ 157;CHR$ 158;CHR$ 159
7012 PLOT 104,0: DRAW 80,0: DRAW 0,7: DRAW -80,0: DRAW
0,-7: PLOT 105,1: DRAW 78,0: DRAW 0,5: DRAW -78,0: DRAW
 0,-5: FOR a=105 TO 183: PLOT a,1: DRAW 0,5: BEEP .01,a
/4.575: NEXT a
7013 INVERSE 1: PLOT 114,3: DRAW 0,2: PLOT 124,2: DRAW
0,4: PLOT 134,3: DAW 0,2: PLOT 144,1: DRAW 0,5: PLOT 15
4,3: DRAW 0,2: PLOT 164,2: DRAW 0,4: PLOT 174,3: DRAW 0
,2
7014 INVERSE 0
7015 PLOT 105,17: DRAW 15,40: PLOT 151,17: DRAW -15,40:
 PLOT 112,17: DRAW 34,0,-PI
7020 PLOT 128,34: DRAW 0,25: PLOT 122,37: DRAW 12,0: DR
AW -3,14: PLOT 122,37: DRAW 3,14
7025 PLOT 0,26: DRAW 117,25,-.25: PLOT 255,26: DRAW -11
7,25,.25
7030 FOR a=36 TO 46: PLOT 0,a: DRAW 255,0,-.78: NEXT a
7035 PLOT 121,72: DRAW 12,0,-.8: PLOT 126,74: DRAW 0,5:
 DRAW 3,0: DRAW 0,-5
7040 FOR a=1 TO FN r(20): PLOT FN r(70)+36,FN r(20)+16:
 PLOT FN r(65)+150,FN r(20)+16: NEXT a
7045 FOR a=1 TO FN r(88): PLOT FN r(255),FN r(87)+88
7050 IF RND<.025 THEN  LET x=FN r(240)+5: LET y=FN r(70
)+5+88: FOR b=1 TO FN r(2): CIRCLE x,y,b: NEXT b: NEXT
a
7055 NEXT a
7060 RETURN
7900 REM **- SET UP VARIABLES -**
7905 LET matters=2: LET speed=100: LET st1col=INT (RND*
32): LET st2col=INT (RND*32): LET st1row=INT (RND*3): L
ET st2row=INT (RND*2): LET time=0: LET damage=0: LET sc
ore=0: LET prob=0: GO SUB 7990
7910 RETURN
7990 REM **- SET UP CRAFT AND SIGHTS -**
7991 LET sparow=0: LET olsprw=sparow: LET distance=9999
: LET spacol=INT (RND*31): LET olspcl=spacol: LET curco
l=16: LET currow=11: LET olcrcl=curcol: LET olcrrw=curr
ow: RETURN
8000 REM **- INSTRUCTIONS -**
8002 CLS
8005 PRINT AT 0,6; PAPER 7; INK 2;CHR$ 162;"SPACE STATI
ON ALPHA";CHR$ 162;AT 1,9; FLASH 1; INK 9;"BY ADAM MANN
ING"
8007 PRINT ''"  The year is ";year;" and"'"Sol III is u
nder attack from theCentaurians. Several Space Stat-ion
s (the Omega series) have  been set up. Yours is the
neare-st to Sol III, and is the only  one left.  It is
your task to  halt this attack for as long as possible
.  The Centaurins have  to capture or destroy your stat
-ion in order to continue their  conquest. Remember YOU
 must stopthis.": GO SUB 3900: GO SUB 8490: CLS
8009 PRINT AT 0,15;"KEY"'" There are two ways of destro
yi-"
8010 PRINT "ng the approaching craft.  One way is to a
im your sights onto  it and press fire.  The other isto
 use MATTER DISINTERGRATORS.  These are the keys:-
       "; FLASH 1;"Q"; FLASH 0;":- Move sight up.
        "; FLASH 1;"A"; FLASH 0;":- Move sight down.
         "; FLASH 1;"I"; FLASH 0;":- Move sight left.
          "; FLASH 1;"P"; FLASH 0;":- Move sight right.
           "; FLASH 1;"O"; FLASH 0;":- Fire laser.
            "; FLASH 1;"[SPACE]"; FLASH 0;":- Matter Di
sintergrator."; FLASH 1;"S"; FLASH 0;":- Turn sound on/
off.          Space Station ";CHR$ 162;" also works wit
h the cursor keys or Kempston Int-erface.": GO SUB 3900
: GO SUB 8490: CLS
8015 PRINT AT 0,5;"MATTER DISINTERGRATORS"'"  You also
have two matter disi-ntergrators at your disposal.  Wh
en the SPACE key is pressed,  they will clear the scree
n of  all approaching Centaurians.  However, they ar
e very unstable,and are likely to explode when  used.
No lasting damage will  harm your station, but the cen
t-re of it will go solid red."
8020 PRINT "When the station has 0";CHR$ 160;" damage,
the disintergrators have a 50";CHR$ 160;"  chance of ex
ploding.  Any more  than 50";CHR$ 160;" damage, and the
 likely-hood of them exploding is equal to your damage.
"
8025 GO SUB 3900: GO SUB 8490
8030 PRINT AT 11,2;" The various gadgets will now";AT 1
3,5;"be explained in detail.": GO SUB 3900: GO SUB 8490
8035 PRINT TAB 9;"DISTANCE READER"''"This gives you the
 distance of  the approaching craft in a unit called pa
rsec.  Remember also  that once the craft is on the
same level as your docking bay, it will make a bee line
 for it. The dcking bay is also where  you shoot from
.": GO SUB 3900: GO SUB 8490
8040 PRINT TAB 9;"TIME INDICATOR"''" This instrument gi
ves you the  time you have left in command  of Space S
tation Alpha.  The  longer you survive, the more  b
onus points you will be given. Read the instrument like
 a ther-mometer.": GO SUB 3900: GO SUB 8490: CLS
8045 PRINT TAB 9;"DAMAGE DISPLAY"''"  The Damage Displa
y gives you  the overall damage around the  station as
 a percentage.  When  it is over about 95";CHR$ 160;",
the stati-on will disintergrate, and the  game will be
over.          Damage is only incurred when a  Cent
aurian craft fires at Space Station Alpha, and the near
er a craft fires to your docking bay,the more damage it
 causes.  The Damage Display is also useful indeciding
wether or not to use  the MATTER DISINTERGRATORS.": GO
 SUB 3900: GO SUB 8490
8047 PRINT TAB 13;"SCOING"''"  Scoring in Space Station
 ";CHR$ 162;" is worked out according to the sta-te of
two things, the position  of the spaceship on the scree
n  and the likelehood of it firing.The nerarer the ship
 is to the  docking bay, the more points youwill get by
shooting it.  You w-ill get more points for a space cra
ft that is very fierce than  one which is not.  There i
s alsoa bonus based on how long you  survive.": GO SUB
 3900: GO SUB 8490
8048 PRINT TAB 11;"COLOUR CODE"''" The ferocity of the
Centaurian craft is shown by it's colour.  The lighter
the colour, the morelikely it is to fire.  This is  the
 table of ferocity.          "; PAPER 1;"BLUE"; PAPER 2
;" Seventh Class craft.       RED  Sixth Clas craft.
      "; PAPER 3;"MAGNETA"; PAPER 2;" Fifth Class craft
.      "; PAPER 4;"GREEN"; PAPER 2;" Fourth Class craft
.       "; PAPER 5;"CYAN"; PAPER 2;" Third Class craft.
        "; PAPER 6;"YELLOW"; PAPER 2;" Second Class cr
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aft.       "; PAPER 7;"WHITE"; PAPER 2;" First Class cra
ft.        A top first clas craft will movevery fast an
d fire all the time.       Good Luck!!!!!": GO SUB 3900:
 GO SUB 8490
8050 PRINT AT 10,7; FLASH 1; PAPER 5; INK 1;"PRESS "; I
NVERSE 1;"R"; INVERSE 0;" TO READ AGAIN";AT 12,4; PAPER
 2; INK 6;"OR ANY OTHER KEY TO GO ON.": GO SUB 3900
8055 BEEP .001,FN r(30): IF INKEY$<>"r" AND INKEY$<>""
THEN  GO TO 8080
8060 IF INKEY$="r" THEN  GO TO 8000
8070 BEEP .001,FN r(-30): GO TO 8055
8080 BORDER 1: PAPER 1: INK 7: CLS : PRINT AT 1,9; BRIG
HT 0; INK 6; PAPER 0;"INPUT OPTIONS:-"
8085 LET row=5: LET col=3: LET m$="KEYBOARD (Q,A,I,etc.
)": GO SUB 8900: LET row=7: LET m$="KEMPSTON INTERFACE.
": GO SUB 8900: LET row=9: LET m$="CURSOR KEYS OR JOYST
ICK.": GO SUB 8900
8090 PRINT AT 11,1;"Enter key,kempston or cursor."
8095 LET row=13: LET col=4: LET u$=CHR$ 138: LET limit=
10: GO SUB 8400
100 IF e$="key" THEN  LET k$="k": PRINT AT 15,3;"O.K. k
eyboard it is.": FOR a=-25 TO 25: BEEP .05,a: BEEP .05,
a-5: BEEP .05,a+5: NEXT a: PAUSE 50: RETURN
8105 IF e$="kempston" THEN  LET k$="j": PRINT AT 15,3;"
Space Station ";CHR$ 162;" now";AT 17,3;"works with the
 Kempston";AT 19,11;"Interface.": FOR a=-25 TO 25: BEEP
 .05,a: BEEP .05,a-5: NEXT a: PAUSE 50: RETURN
8110 IF e$="cursor" THEN  LET k$="c": PRINT AT 15,3;"Yo
u can now use the cursor";AT 17,3;"keys or a cursor joy
stick.": GO SUB 8490: RETURN
8115 PRINT AT 15,3;"Incorrect answer.  Please";AT 17,4;
"re-enter.": BEEP .5,-25: BEEP .5,-30: FOR a=13 TO 21 S
TEP 2: PRINT AT a,0;"                                  ":
 NEXT a: GO TO 8090
8400 REM **- CURSOR INPUT -**
8402 LET e$=""
8405 PRINT AT row,col;e$;u$: LET i$=INKEY$: PRINT AT ro
w,col;e$;" ": IF i$="" THEN  GO TO 8405
8406 BEEP .01,25
8407 IF i$=CHR$ 13 THEN  PRINT AT row,col+LEN e$;" ": R
ETURN
8410 IF i$=CHR$ 12 AND LEN e$<>0 THEN  LET e$=e$( TO LE
N e$-1): PRINT AT row,col+LEN e$+1;" ": GO TO 8405
8411 IF i$=CHR$ 12 AND LEN e$=0 THEN  GO TO 8405
8415 LET e$=e$+i$: IF LEN e$>limit OR col+LEN e$>31 THE
N  PRINT AT row,col;"          ": BEEP .5,-20: BEEP .5,
-25: GO TO 8402
8420 IF INKEY$<>"" THEN  GO TO 8420
8425 GO TO 8405
8490 LET m$="PRESS ANY KEY..."
8492 PRINT AT 21,8;m$: BEEP .01,FN r(30): BEEP .01,FN r
(-30): LET m$=m$(2 TO )+m$(1)
8495 IF INKEY$<>"" THEN  BEEP .01,25: CLS : RETURN
8497 GO TO 8492
8500 REM **- DO YOU WANT INSTRUCTIONS -**
8510 BORDER 2: PAPER 2: INK 7: BRIGHT 1: CLS
8515 GO SUB 3900
8520 FOR r=3 TO 10: PRINT AT r,3;">": BEEP .01,30: NEXT
 r: BEEP .01,25: LET m$="Do you want to read": LET col=
3: LET row=11: GO SUB 8900: LET m$="the instructions?":
 LET row=12: GO SUB 8900: LET m$=">": LET row=13: GO SU
B 8900: LET m$="(Y/N {Y=Yes,N=No})": LET row=14: GO SUB
 8900
8525 LET m$=">": LET row=row+1: LET col=3: GO SUB 8900
8530 BEEP .01,RND*120-60
8532 IF INKEY$<>"" THEN  BEEP .01,25
8535 IF INKEY$="Y" OR INKEY$="y" THEN  LET m$="Y:- Yes.
": LET row=row+1: GO SUB 8900: FOR r=0 TO 3: BEEP .05,r
: NEXT r: GO SUB 8000: RETURN
8540 IF INKEY$="N" OR INKEY$="n" THEN  LET m$="N:- No."
: LET row=row+1: GO SUB 8900: FOR r=3 TO 0 STEP -1: BEE
P .05,r: NEXT r: RETURN
8545 GO TO 8530
8900 FOR c=1 TO LEN m$: PRINT AT row,c+col-1;m$(c): BEE
P .05,20: NEXT c: BEEP .05,30: RETURN
9000 REM **- TITLE SCREEN -**
9005 BORDER 0: PAPER 0: INK 7: BRIGHT 1: CLS
9010 CIRCLE 128,88,87: CIRCLE 128,88,67: CIRCLE 128,88,
17
9015 PLOT 120,104: DRAW 5,52: PLOT 136,104: DRAW -5,52
9020 PLOT 142,96: DRAW 52,-5: PLOT 142,80: DRAW 52,5
9025 PLOT 120,72: DRAW 5,-52: PLOT 136,72: DRAW -5,-52
9030 PLOT 114,96: DRAW -52,-5: PLOT 114,80: DRAW -52,5
9040 FOR y=140 TO 142: FOR x=82 TO 84: PLOT y,x: DRAW -
3,0: DRAW -9,9: DRAW 0,1: DRAW -2,2: DRAW -6,0: DRAW -3
,-3: DRAW 0,-1: DRAW -1,-1: DRAW 0,-7: DRAW 3,-1: DRAW
6,0: DRAW 9,9: DRAW 4,5
9045 NEXT x: NEXT y
9050 INK 5: FOR r=3 TO 18: PRINT AT r,3;CHR$ 162: NEXT
r: FOR c=3 TO 29: PRINT AT 18,c;CHR$ 162: NEXT c: FOR r
=18 TO 3 STEP -1: PRINT AT r,29;CHR$ 162: NEXT r: FOR c
=29 TO 3 STEP -1: PRINT AT 3,c;CHR$ 162: NEXT c
9060 PRINT AT 0,7; FLASH 1; INK 7; PAPER 2;"SPACE STATI
ON ALPHA";AT 1,10; FLASH 0; BRIGHT 0; INK 7; PAPER 0;"P
RESS ANY KEY"
9065 FOR a=1 TO 16: BEEP s(a,1),s(a,2): IF INKEY$<>"" T
HEN  RETURN
9070 NEXT a: PAUSE 25: IF INKEY$<>"" THEN  RETURN
9075 GO TO 9065
9500 DIM s(16,2): FOR a=1 TO 16: READ s(a,1),s(a,2): NE
XT a
9505 DATA .25,0,.25,7,.125,5,.125,4,.125,2,.25,12,.25,7
,.125,5,.125,4,.125,2,.25,12,.25,7,.125,5,.125,4,.125,5
,.25,2
9510 DIM p$(3,6,32): FOR a=1 TO 3: FOR b=1 TO 6: READ p
$(a,b): NEXT b: NEXT a
9515 DATA "The Centaurian craft has docked","with your
station.  They have ","shot all the survivors.  There",
"now stands nothing between them","and the conquest of
Earth.","   You failed in your task."
9520 DATA " ","Space Station Terminated STOP","Computer
 estimates chances of ","civilisation surviving the Cen
t-","aurian onsluaght as 0% STOP    ","  Message en....
.."
9525 DATA " "," ","You have completed your command","of
 the Station.  The Centau-","rians have been defeated."
,"    Well done!!!!!!      "
9530 RETURN
9900 REM ** STOP THE TAPE **
9905 BORDER 6: PAPER 6: INK 0: BRIGHT 0: CLS
9910 PRINT AT 2,5;"
;AT 3,5;"
;AT 4,5;"
;AT 5,;"
;AT 6,5;"
;AT 7,5;"
;AT 8,8;"
;AT 9,5;"
;AT 10,5;"
9915 INK 1: PRINT AT 12,10;"
;AT 13,11;"
;AT 14,11;"
;AT 15,11;"
;AT 16,11;"
9920 INK 2: PRINT AT 17,25;"
;AT 18,5;"
;AT 19,7;"
;AT 20,7
;"
;AT 21,7;"
"
9925 FOR A=5 TO 20 STEP 2: BEEP .1,A: NEXT A: FOR A=20
TO -5 STEP -2: BEEP .05,A: BEEP .05,A-5: NEXT A
9930 BEEP .5,-10: GO SUB 500
9935 GO SUB 9500
9940 RETURN
9990 REM **- O.K. GET READY TO PLAY -**
9991 BORDER 6: PAPER 6: INK 0: BRIGHT 1: CLS : PRINT AT
 2,5;"
;AT 3,4;"
;AT 4,4;"
;A
T 5,3;"
;AT 6,4;"
;AT 7,4;"
": LET m$="O.K. GET READY TO PLAY,": LET row=9: LET
col=3: GO SUB 8900:
9992 LET m$="YOUR COMMAND STARTS IN": LET row=11: LET c
ol=2: GO SUB 8900: LET m$="10 SECONDS.": LET row=13: LE
T col=11: GO SUB 8900: FOR a=9 TO 0 STEP -1: PRINT AT 1
3,11;" ";a: BEEP .5,25: PAUSE 25: NEXT a: RETURN
```

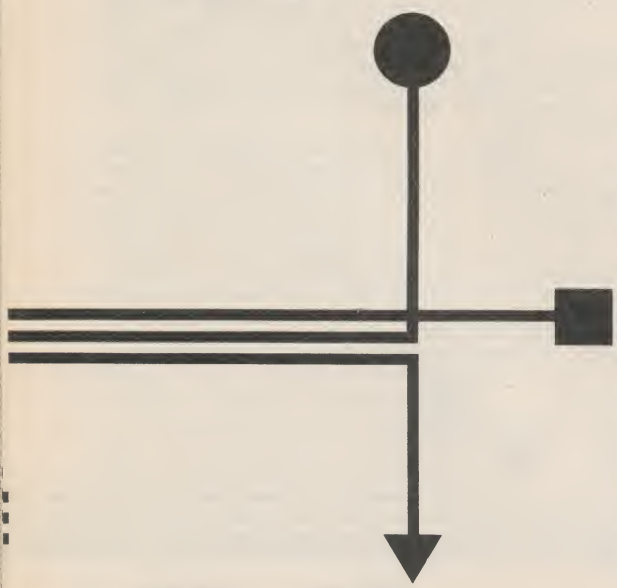

ESCAPE From DEATH

C64

Program 1

```
10 poke53280,0:poke53281,0:print"■"
11 print"■■■■■■■■■■please wait"
12 print"■■■■■■■■■setting up graphics"
15 goto50000
20 print"■              instructions"
25 print"              ____________"
30 print"■ as sir pentagon, you have to pilot your"
35 print"  ship through the screen in order to"
40 print"■ collect the following objects:-"
45 print"■ screen 1:-a computer"
50 print"■         computer monitor"
55 print"■      and a box of preprials"
60 print"■     when this is done the game ends"
75 print"■ press a key, type in :new: then load in"
80 print"             program number 2"
90 geta$:ifa$="" then90
100 end
50000 poke52,48:poke56,48:clr
50005 poke56334,0:poke1,35
50010 forz=0to1000:poke12288+z,peek(53248+z):nextz
50015 poke1,39:poke56334,1
50020 forz=0to767:readx:poke12288+z,x:nextz:poke53272,28:goto20
```

Gary Biasillo

You have to guide your ship through the screen collecting various objects, then escaping through the escape door. This may sound easy, but the planet you have been transported to 'Nilgypon', has hostile aliens and a special type of radioactive electricity which attacks stationary objects (like the objects you have to collect), which will kill anything which makes contact with them, so you have a 50/50% chance of collecting the object. You start off in 'HI' gear which can be switched to 'LO' gear by pressing the 'FIRE' button, and the same goes for 'LO' to 'HI' gear.

Use joystick in port #1 or use keys: CRTL = left, 2 = right, 1 = up, = down, space bar = fire.

```
50100 data60,66,153,161,161,153,66,60
50105 data224,240,216,204,254,254,198,198
50110 data248,252,204,252,198,198,254,252
50115 data124,254,198,192,192,198,254,124
50120 data252,254,198,198,198,198,254,252
50125 data254,254,192,248,248,192,254,254
50130 data254,254,192,248,248,192,192,192
50135 data124,254,198,192,222,198,254,124
50140 data198,198,198,254,254,198,198,198
50145 data254,254,56,56,56,56,254,254
50150 data254,254,12,12,204,204,252,120
50155 data198,204,216,240,248,220,206,198
50160 data192,192,192,192,192,192,254,254
50165 data198,238,254,214,198,198,198,198
50170 data198,198,230,246,222,206,198,198
50175 data124,254,198,198,198,198,254,124
50180 data252,254,198,198,254,252,192,192
50185 data124,254,198,198,198,222,254,119
50190 data252,254,198,198,254,252,198,198
50195 data124,254,192,252,126,6,254,124
50200 data254,254,56,56,56,56,56,56
50205 data198,198,198,198,198,198,254,124
50210 data198,198,198,198,198,108,56,16
50215 data198,198,198,198,214,254,238,198
50220 data198,198,108,56,56,108,198,198
50225 data198,198,198,238,124,56,56,56
50230 data254,254,12,24,48,96,254,254
50235 data170,85,170,85,170,85,170,85
50240 data0,0,0,0,0,0,255,0
50245 data6,6,6,6,6,6,6,6
50250 data96,96,96,96,96,96,96,96
50255 data0,255,0,0,0,0,0,0
50260 data0,0,0,0,0,0,0,0
50265 data0,0,0,0,0,0,3,7
50270 data102,102,102,0,0,0,0,0
50275 data0,0,0,0,0,0,192,224
50280 data7,3,0,0,0,0,0,0
50285 data224,192,0,0,0,0,0,0
50290 data24,24,24,60,126,102,195,153
50295 data153,195,102,126,60,24,24,24
50300 data16,16,8,8,16,16,8,8
50305 data0,255,129,189,165,165,165,165
50310 data165,165,165,165,189,129,255,0
50315 data127,96,111,104,104,111,96,127
50320 data0,0,0,0,56,56,24,48
50325 data0,0,0,126,126,0,0,0
50330 data0,0,0,0,0,56,56,56
50335 data254,6,245,22,22,246,6,254
50340 data124,254,206,222,246,230,254,124
50345 data56,120,248,56,56,56,254,254
50350 data124,254,198,12,48,96,254,254
50355 data254,254,6,28,6,198,254,124
50360 data14,30,54,102,255,255,6,6
50365 data254,254,192,252,254,6,254,252
50370 data124,254,192,252,254,198,254,124
50375 data254,254,198,12,24,48,96,192
50380 data124,254,198,124,198,198,254,124
50385 data124,254,198,198,254,126,6,6
50390 data0,24,24,0,0,24,24,0
50395 data0,24,24,0,0,24,24,48
50400 data3,14,29,249,249,29,14,3
50405 data0,126,126,0,0,126,126,0
50410 data192,112,184,159,159,184,112,192
50415 data124,254,198,12,24,0,24,24
50420 data0,0,0,204,51,0,0,0
50525 data16,16,8,204,51,16,8,8
50530 data126,255,239,247,119,7,7,7
50535 data7,7,7,7,7,7,7,0
50540 data7,7,7,119,247,239,255,126
50545 data255,255,255,255,255,255,255,255
50550 data254,255,255,255,254,252,252,252
50555 data0,255,255,255,255,255,255,255
50560 data0,252,252,252,252,252,252,252
50565 data252,252,252,252,252,252,252,188
50570 data107,219,171,91,251,3,255,255
50575 data255,255,0,255,170,85,255,0
50580 data218,215,218,213,223,192,255,255
50585 data218,214,218,214,218,214,218,214
50590 data107,91,107,91,107,91,107,91
50595 data255,255,192,223,218,213,219,214
50600 data255,255,3,251,171,91,235,91
50605 data0,255,85,170,255,0,255,255
50610 data254,254,198,198,198,254,254,0
50615 data231,24,36,66,66,129,129,129
50620 data129,129,129,66,66,36,24,231
50625 data224,24,4,2,2,1,1,1
50630 data1,1,1,2,2,4,24,224
50635 data7,24,32,64,64,128,128,128
50640 data128,128,128,64,64,32,23,7
50645 data15,63,127,120,240,224,224,224
50650 data224,224,224,240,120,127,63,15
50655 data0,0,0,255,254,252,248,0
50660 data0,248,252,254,255,0,0,0
50665 data255,255,255,255,255,255,255,255
50670 data0,3,7,126,254,102,102,102
50675 data255,255,255,255,255,255,255,255
ready.
```

Program 2

```
4 REM CLR
5 PRINT"■"
10 PRINT"                    PLEASE WAIT"
14 REM CRD
15 PRINT"■              SETTING UP GRAPHICS"
20 FORN=0TO767:READA:POKE14336+N,A:NEXT
25 PRINT"■ PRESS ANY KEY, THEN TYPE IN NEW, THEN"
29 REM CRD
30 PRINT"■           LOAD IN PROGRAM NUMBER 3"
35 GETA$:IFA$=""THEN35
40 END
99 REM SHIP#1
100 DATA0,0,0,0,0,0,0,0
101 DATA0,0,0,0,0,0,240,0
102 DATA3,220,0,13,92,0,53,92
103 DATA0,213,92,63,255,255,192,0
104 DATA3,63,255,255,0,0,0,0
105 DATA0,0,0,0,0,0,0,0
106 DATA0,0,0,0,0,0,0,0
107 DATA0,0,0,0,0,0,0,0
109 REM SHIP#2
110 DATA0,0,0,0,0,0,0,0
111 DATA0,0,0,0,15,0,0,53
112 DATA192,0,53,112,0,53,92,0
113 DATA53,87,0,255,255,252,192,0
114 DATA3,255,255,252,0,0,0,0
```

```
115 DATA0,0,0,0,0,0,0,0
116 DATA0,0,0,0,0,0,0,0
117 DATA0,0,0,0,0,0,0,0
119 REM COMPUTER
120 DATA255,255,248,255,255,248,192,1
121 DATA152,192,1,248,192,1,152,192
122 DATA1,248,192,1,152,255,255,248
123 DATA240,7,248,255,255,248,0,0
124 DATA0,0,0,0,0,0,0,0
125 DATA0,0,0,0,0,0,0,0
126 DATA0,0,0,0,0,0,0,0
127 DATA0,0,0,0,0,0,0,0
129 REM BOX
130 DATA0,0,0,0,0,0,0,0
131 DATA0,0,0,0,0,0,0,0
132 DATA0,0,0,0,0,0,0,0
133 DATA0,0,0,0,0,0,31,255
134 DATA255,42,170,175,85,85,95,255
135 DATA255,253,213,85,91,170,170,173
136 DATA213,85,91,170,170,175,213,85
137 DATA84,170,170,172,255,255,248,0
139 REM MONITOR
140 DATA0,0,0,0,0,0,0,0
141 DATA0,0,0,0,0,0,0,31
142 DATA255,224,63,255,240,58,170,176
143 DATA53,85,112,58,170,176,53,85
144 DATA112,58,170,176,53,85,112,58
145 DATA170,176,53,85,112,63,255,240
146 DATA31,255,224,0,48,0,0,48
147 DATA0,0,252,0,3,255,0,0
149 REM FACE#1
150 DATA0,0,0,0,0,0,0,170
151 DATA128,2,170,160,10,251,232,10
152 DATA251,232,10,203,40,10,203,40
153 DATA10,170,168,10,170,168,10,170
154 DATA168,10,170,168,10,170,168,8
155 DATA170,136,10,51,40,10,51,40
156 DATA2,128,160,2,170,160,0,170
157 DATA128,0,0,0,0,0,0,0
159 REM FACE#2
160 DATA0,0,0,0,0,0,0,170
161 DATA128,2,170,160,10,251,232,10
162 DATA251,232,10,56,232,10,56,232
163 DATA10,170,168,10,170,168,10,170
164 DATA168,10,170,168,10,170,168,8
165 DATA170,136,10,51,40,10,51,40
166 DATA2,128,160,2,170,160,0,170
167 DATA128,0,0,0,0,0,0,0
169 REM MONSTER#1
170 DATA170,168,0,250,170,0,250,170
171 DATA0,250,170,0,170,168,0,0
172 DATA40,0,0,40,0,0,40,0
173 DATA0,40,0,0,40,0,0,40
174 DATA0,0,170,0,2,186,0,2
175 DATA186,0,2,186,0,3,234,0
176 DATA2,170,0,0,170,0,0,40
177 DATA0,0,8,0,10,170,0,0
179 REM MONSTER#2
180 DATA0,42,170,0,170,175,0,170
181 DATA175,0,170,175,0,42,170,0
182 DATA40,0,0,40,0,0,40,0
183 DATA0,40,0,0,40,0,0,40
184 DATA0,0,170,0,0,174,128,0
185 DATA174,128,0,174,128,0,171,64
186 DATA0,170,128,0,42,128,0,10
187 DATA0,0,8,0,0,42,160,0
189 REM MONSTER#3
190 DATA0,0,0,3,248,0,15,254
191 DATA0,31,255,0,63,255,128,127
192 DATA255,192,127,255,192,231,57,224
193 DATA214,214,224,246,214,224,246,214
194 DATA224,246,214,224,246,214,224,195
195 DATA57,224,127,255,192,127,255,192
196 DATA63,255,128,31,255,0,15,254
197 DATA0,3,248,0,0,0,0,0
199 REM MONTER#4
200 DATA0,56,0,0,124,0,0,124
201 DATA0,0,124,0,0,56,0,0
202 DATA124,0,0,254,0,0,254,0
203 DATA0,254,0,0,254,0,0,254
204 DATA0,0,254,0,0,124,0,0
205 DATA124,0,0,124,0,0,124,0
206 DATA0,56,0,0,56,0,0,56
207 DATA0,0,108,0,0,0,0,0
209 REM ESCAPE DOOR
210 DATA2,170,0,10,154,128,41,153
211 DATA160,41,153,160,169,153,168,153
212 DATA153,152,153,153,152,153,153,152
213 DATA153,153,152,153,153,152,153,153
214 DATA152,153,153,152,153,153,152,153
215 DATA153,152,153,153,152,153,153,152
216 DATA153,153,152,153,153,152,153,153
217 DATA152,170,170,168,170,170,168,0
READY.
```

Program 3

```
5 print"■■":poke53280,11:poke53281,0
10 poke53272,28:poke53269,0:gosub2000
15 sc=0:hs=0
17 restore:gosub50000:gosub60000
20 li=3:bo=5000:q=0
25 gosub2016:gosub2034
30 gosub2054
31 ifq=3 thengoto60080
32 gosub2004
34 gosub2126
36 gosub2106
38 gosub2088
40 gosub2136
42 gosub2162
44 goto 31
2000 forl=54272to54296:pokel,0:next
2002 return
```

```
2004 bo=bo-20:print"                bonus:  ";bo
2006 print"                gear:  ";gear$
2008 print"                lives:  ";li
2010 print"  score:  ";sc
2012 print"  hi-score:  ";hs
2013 ifli=0 thengoto60300
2014 return
2016 poke54296,15:poke54277,32
2018 poke54278,255:poke54276,23
2020 poke54287,5
2022 forl=255to0step-1:poke54273,l
2024 next
2026 forl=0to255step.5:poke54273,l
2028 next
2030 poke54273,0:poke54287,0
2032 return
2034 poke54287,0:poke54277,32
2036 poke54278,255:poke54272,9
2038 poke54276,33:poke54296,15
2040 readh:ifh=-1 thenpoke54296,0:return
2042 readl
2044 readd
2046 poke54273,h
2048 poke54272,l
2050 fort=0tod:nextt
2052 goto2040
2054 poke2040,225:poke2041,226
2056 poke2042,227:poke2043,235
2058 poke2044,229:poke2045,230
2060 poke2046,230:poke2047,232
2062 g=15:v=53248:x=40:y=60
2064 gear$="hi":x1=245:y1=68
2066 x2=140:y2=130
2068 x3=144:y3=170
2070 x4=245:y4=58
2072 x5=141:y5=130
2074 x6=250:y6=170
2076 x7=60:y7=98
2077 m1=-15:m2=15:m3=-10:m4=10
2078 pokev+21,0:pokev+28,249
2079 pokev+37,10:pokev+38,7
2080 pokev+40,10:pokev+41,7
2081 pokev+42,9:pokev+43,2
2082 pokev+44,5:pokev+44,6
2083 pokev,x:pokev+1,y
2084 pokev+45,6:pokev+46,2:pokev+2,x1
2085 pokev+3,y1:pokev+4,x2:pokev+5,y2:pokev+6,x3:pokev+7,y3:pokev+21,255
2086 return
2088 pokev,x:pokev+1,y
2090 pokev+2,x1:pokev+3,y1
2092 pokev+4,x2:pokev+5,y2
2094 pokev+6,x3:pokev+7,y3
2096 pokev+8,x4:pokev+9,y4
2098 pokev+10,x5:pokev+11,y5
2100 pokev+12,x6:pokev+13,y6
2102 pokev+14,x7:pokev+15,y7
2104 return
```

ESCAPE From DEATH

```
2106 ifx4<40 thenm1=15
2107 ifx4>240 thenm1=-15
2108 ifx5<50 thenm2=15
2109 ifx5>230 thenm2=-15
2110 ifx6<40 thenm3=10:poke2046,232
2111 ifx6>240 thenm3=-10:poke2046,231
2112 ifx7<40 thenm4=10:poke2047,232
2113 ifx7>240 thenm4=-10:poke2047,231
2114 if(peek(2044)=229)thenpoke2044,230:goto2118
2116 if(peek(2044)=230)thenpoke2044,229
2118 if(peek(2045)=229)thenpoke2045,230:goto2122
2120 if(peek(2045)=230)thenpoke2045,229
2122 return
2126 x4=x4+m1
2128 x5=x5+m2
2130 x6=x6+m3
2132 x7=x7+m4
2134 return
2136 ifpeek(145)=251 thengosub2150
2138 ifpeek(145)=247 thengosub2152
2140 ifpeek(145)=254 thengosub2154
2142 ifpeek(145)=253 thengosub2156
2144 ifpeek(145)=239 thengosub2158
2146 ifjs=239 thengosub2158
2148 return
2150 x=x-g:poke2040,224:ifx<0 thenx=0
2151 return
2152 x=x+g:poke2040,225:ifx>255 thenx=255
2153 return
2154 y=y-g:ify<0 theny=0
2155 return
2156 y=y+g:ify>255 theny=255
2157 return
2158 ifg=7theng=15:gear$="hi":return
2160 g=7:gear$="lo":return
2162 pokev+30,0:pokev+31,0
2166 if((peek(v+30)and3)=3)thensc=sc+1000:pokev+21,(peek(v+21)-2):q=q+1:return
2168 if((peek(v+30)and5)=5)thensc=sc+1000:pokev+21,(peek(v+21)-4):q=q+1:return
2170 if((peek(v+30)and9)=9)and(peek(v+21)=249)thenq=3:sc=sc+bo+1000:return
2172 if((peek(v+30)and1)=1)thenli=li-1:bo=5000:gosub2178:q=0:x=40:y=60:goto2054
2174 if((peek(v+31)and1)=1)thenli=li-1:bo=5000:gosub2178:q=0:x=40:y=60:goto2054
2176 return
2178 forl=yto255step3:pokev+1,l:pokev+38,l
2180 poke54296,15:poke54287,20
2182 poke54273,l:nextl
2184 poke54296,0:pokev+38,7
2186 return
50000 print"■■            escape from death."
50005 print"■       written by  gary biasillo"
50009 rem crd
50010 print"■         @ copyright asp 1985"
50015 a$="                                                "
50020 b$="press  %fire$  to start game . "
50035 d$=" did you hear about the idiot who bought a computer "
50040 e$="to play games on ?  he took it back cause the darts kept falling "
50045 f$="out. special thanks to computer gamer for publishing my game. "
50060 z$=a$+b$+d$+e$+f$
50061 rem hom  11*crd  yel
50062 print"■qqqq
```

```
50064 fort=1to10:print"  M                                                N":next
50065 print"  LQQQQQQQQQQQQQQQQQQQQQQQQQQQQQQQQQQQQJ"
50067 print"■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■my top three games"
50069 print"■■■■■■■■■■■■■■■■■■■
```

BBC 32K

SNAKE MAZE

Carlos Augusto Duarte Dondào

Snake-Maze is a machine code game for the 32K BBC computer or Electron. You are in control of a laser green snake through five different mazes, fighting a red snake and some evil ghosts.

To go to the next maze you must kill the red snake, but the only way to do it is to shoot her from behind. You must avoid collisions with the red snake head and with the red ghosts. You must also avoid the spin bullets fired by the red snake, they will kill you if they hit you on the head or make you lose a segment if it. is in your body.

With a new and more difficult maze the number of ghosts increases to a maximum of five on the fifth screen. Completing the fifth screen will give you a bonus depending on the time taken to do the task, and bring you back to the beginning.

If you eat the strawberry the ghosts turn to green for a while and then you can shoot them getting extra points. As your snake is in continuous movement you must have a quick finger to decide which direction you want to go. Otherwise she decides for you when she hits a block, but you're always in control.

One last warning, don't shoot yourself or you will have a nice and inglorious death.

As you see the game is in 3 parts and you must carefully type each one of them (special care to program 2) and save them one after another on the same tape. To play the game just type CHAIN" and that's it.

The game itself runs on an Electron, only the mode 7 statements for instructions and Hi-score table will look a bit strange but this can easily by changed by Electron users.

Program 1

```
   10  REM ================
   20  REM = Snake Maze-1 =
   30  REM =       by     =
   40  REM =   C.Rondao   =
   50  REM = Lisb/Jan/85  =
   60  REM ================
   70  MODE7
   80 MASE1=19000:MASE2=MASE1+140:MASE3=
MASE2+140:MASE4=MASE3+140:MASE5=MASE4+14
0:BLOCK=MASE5+140
   90 FOR A%=MASE2 TO MASE2+139:READ B%:
?A%=B%:NEXT
  100 DATA1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,1
  110 DATA1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,1
  120 DATA1,0,0,1,1,1,0,0,0,0,0,0,0,0,1,
1,1,0,0,1
  130  DATA 1,0,0,0,0,0,0,0,0,1,1,0,0,0,
0,0,0,0,0,1
  140  DATA 1,0,0,1,1,1,0,0,0,0,0,0,0,0,
1,1,1,0,0,1
  150 DATA1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,1
  160 DATA1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,1
  170 FOR A%=MASE3 TO MASE3+139:READ B%:
?A%=B%:NEXT
  180 DATA1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,1
  190 DATA1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,1
  200 DATA1,0,0,1,1,1,0,0,0,1,1,0,0,0,1,
1,1,0,0,1
  210 DATA1,0,0,1,1,1,0,0,1,1,1,1,0,0,1,
1,1,0,0,1
  220 DATA1,0,0,1,1,1,0,0,0,1,1,0,0,0,1,
1,1,0,0,1
  230 DATA1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,1
  240 DATA1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,1
  250  FOR A%=MASE1 TO MASE1+139:READ B%
:?A%=B%:NEXT
  260 DATA1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,1
  270  DATA1,0,0,0,0,0,0,0,0,0,0,0,0,0,0
,0,0,0,0,1
  280  DATA1,0,0,1,0,0,0,0,0,0,0,0,0,0,0
,0,1,0,0,1
  290  DATA1,0,0,1,0,0,1,1,1,0,0,1,1,1,0
,0,1,0,0,1
  300  DATA1,0,0,1,0,0,0,0,0,0,0,0,0,0,0
,0,1,0,0,1
  310 DATA1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,1
  320 DATA1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,1
  330 FOR A=MASE4 TO MASE4+139:READ B:?A
=B:NEXT
  340 DATA 1,0,0,0,0,0,0,0,0,0,0,0,0,0,0
,0,0,0,0,1
  350 DATA 1,0,1,0,1,0,1,0,0,1,1,0,0,1,0
,1,0,1,0,1
  360 DATA 1,0,1,0,1,0,1,0,0,1,1,0,0,1,0
,1,0,1,0,1
  370 DATA 1,0,1,0,1,0,0,0,0,1,1,0,0,0,0
,1,0,1,0,1
  380 DATA 1,0,1,0,1,0,1,0,0,1,1,0,0,1,0
,1,0,1,0,1
  390 DATA 1,0,1,0,1,0,1,0,0,1,1,0,0,1,0
,1,0,1,0,1
  400 DATA 1,0,0,0,0,0,0,0,0,0,0,0,0,0,0
,0,0,0,0,1
```

```
  410 FOR A=MASE5 TO MASE5+139:READ B:?A
=B:NEXT
  420 DATA 1,0,0,0,0,0,0,0,0,0,0,0,0,0,0
,0,0,0,0,1
  430 DATA 1,0,1,1,1,0,1,1,1,0,0,1,1,1,0
,1,1,1,0,1
  440 DATA 1,0,1,1,1,0,1,1,1,0,0,1,1,1,0
,1,1,1,0,1
  450 DATA 1,0,0,0,0,0,0,0,0,0,0,0,0,0,0
,0,0,0,0,1
  460 DATA 1,0,1,1,1,0,1,1,1,0,0,1,1,1,0
,1,1,1,0,1
  470 DATA 1,0,1,1,1,0,1,1,1,0,0,1,1,1,0
,1,1,1,0,1
  480 DATA 1,0,0,0,0,0,0,0,0,0,0,0,0,0,0
,0,0,0,0,1
  490 FOR A%=BLOCK TO BLOCK+15:READ B%:?
A%=B%:NEXT
  500 DATA119,175,223,175,223,175,223,11
9,238,191,95,191,95,191,95,238
  510  PROCTITLE
  520 CHAIN""
  530 DEFPROCTITLE
  540 FORC%=4 TO 12
  550 PRINTTAB(9,C%)CHR$(129)"!"
  560 NEXT
  570 PRINTTAB(11,4)CHR$(132)"Esmifrasof
t"
  580 PRINTTAB(11,6)CHR$(132)"presents"

  590 PRINTTAB(11,8)CHR$(133)CHR$(136)"S
NAKE MAZE"
  600 PRINTTAB(11,10)CHR$(132)"by"
  610 PRINTTAB(11,12)CHR$(132)"C.Rondao
& A.Otero"
  620  PRINTCHR$(133)CHR$(136)"-PROG2-"
  630 ENDPROC
```

Program 2

```
>WIDTH 40
>*
   10 REM ================
   20 REM = Snake Maze-2 =
   30 REM ================
   40MASE1=&4A38
   50 FLAP=&4A38
   60BLOCK=&4CF4
   70 HEADR=18400
   80 HEADL=HEADR+16:HEADUP=HEADL+16:HEA
DW=HEADUP+16:BODI=HEADW+16:NAV=BODI+16:D
AR=NAV+16:DAL=DAR+16:DAUP=DAL+16:DADW=DA
UP+16:RBODI=DADW+16:NAV1=RBODI+16
   90LPL=NAV1+16:LPH=LPL+10:TPL=LPH+10:T
PH=TPL+10:FIRSTPL=TPH+10:FIRSTPH=FIRSTPL
+10:FTPL=FIRSTPH+10:FTPH=FTPL+10
  100 GL=FTPH+10:GH=GL+5:LS=GH+5:IL=LS+5
:DL=IL+5:IH=DL+1:DH=IH+5:GHOST=DH+1:NGH=
GHOST+16:FINE=NGH+1:MORT=FINE+1
  110 FL=MORT+1:FH=FL+1:PIM=FH+1:RPL=PIM
+1:RPH=RPL+10:IPL=RPH+10:IPH=IPL+10:DELA
Y0=IPH+10:DELAY1=DELAY0+1:DELAY2=DELAY1+
1
  120 SHOT=DELAY2+1:DEAD=SHOT+1:TRAS=DEA
D+1:NL=TRAS+1:NH=NL+1:BULLET=NH+1:GEXP=B
ULLET+16:HEXP=GEXP+16:TEXP=HEXP+16:NEWSC
=TEXP+16
  130 GHOST1=NEWSC+1:GHOST2=GHOST1+16:ST
BERRY=GHOST2+16:BR=STBERRY+16:EAT=BR+1:D
ELAY3=EAT+1
  140 PATO=DELAY3+1:TJ=PATO+16:TP=TJ+16:
YL=TP+16:YH=YL+1:SHT0=YH+1:SHT1=SHT0+1
  150 DW=SHT1+1:NSEG=DW+1:TMORT=NSEG+1
  160 FOR A=TJ TO TJ+31:READ B:?A=B:NEXT
  170 DATA 0,1,0,3,4,1,0,0,0,0,8,10,12,0
,8,0,0,0,4,2,1,1,2,0,0,4,8,8,12,2,0,0
  180 FOR A=PATO TO PATO+15:READ B:?A=B:
NEXT
  190 DATA 32,64,144,33,33,144,64,32,64,
32,129,72,72,129,32,64
  200FOR A=HEADR TO HEADR+79:READB:?A=B:
NEXT
```

```
  210DATA 16,48,97,240,240,97,48,16,120,
72,120,192,192,120,72,120,16,33,225,48,4
8,225,33,16,120,192,104,240,240,104,192,
120,32,32,112,150,210,112,48,16,64,64,22
4,150,180,224,192,128
  220DATA 16,48,112,210,150,112,32,32,12
8,192,224,180,150,224,64,64,0,16,48,112,
112,48,16,0,0,128,192,224,224,192,128,0
  230FOR A=FIRSTPL TO FIRSTPL+39:READ B:
?A=B:NEXT
  240DATA&90,&A0,&B0,&C0,&D0,&E0,&20,&60
,&A0,&E0,&5C,&5C,&5C,&5C,&5C,&5C,&5E,&5F
,&60,&61,&50,&90,&D0,&10,&50,&90,&A0,&B0
,&C0,&D0,&77,&78,&79,&7B,&7C,&7D,&7D,&7D
,&7D,&7D
  250 FOR A=GHOST1 TO GHOST1+47:READ B:?
A=B:NEXT
  260 DATA 3,7,15,105,45,15,15,9,8,12,14
,194,74,14,14,2,48,112,240,150,210,240,2
40,144,128,192,224,44,164,224,224,32,64,
224,22,15,15,15,7,1,64,134,15,15,15,15,1
4,8
  270 FOR A=DAR TO DAR+79:READ B:?A=B:NE
XT
  280 DATA 1,3,22,15,15,22,3,1,8,132,135
,12,12,135,132,8,1,18,30,3,3,30,18,1,8,1
2,134,15,15,134,12,8,2,2,7,105,45,7,3,1
  290 DATA 4,4,14,105,75,14,12,8,1,3,7,4
5,105,7,2,2,8,12,14,75,105,14,4,4,0,1,3,
7,7,3,1,0,0,8,12,14,14,12,8,0
  300 FOR A=BULLET TO BULLET+47:READ B:?
A=B:NEXT
  310 DATA 0,0,16,48,48,16,0,0,0,0,128,1
92,192,128,0,0,0,15,1,1,2,2,4,4,0,7,5,5,
5,5,5,7,3,21,2,69,9,14,69,6,0,6,9,42,12,
20,69,2
  320FOR I%=0 TO 2 STEP 2:P%=20000
  330[OPT I%
  340.START
  350LDA#&5A:STA&71:LDA#&80:STA&70
  360JSR T1
  370LDA#&7E:STA&71:LDA#&C0:STA&70
  380JSR T1
  390  LDA#&5B:STA&71:LDA#&C0:STA&70
  400 LDX#0
  410.C7
  420 LDY#0
  430.C0
  440TYA:STA&74:LDA(&72),Y:BEQ C2
  450LDY#15
  460.C1
  470LDA BLOCK,Y:STA(&70),Y:DEY:BPL C1
  480.C2
  490CLC:LDA&70:ADC#16:STA&70:LDA&71:ADC
#0:STA&71
  500 LDA&74:TAY:INY:CPY#140:BNE C0
  510 INX:CPX#5:BNE C7
  520RTS
  530.T1
  540LDX#0
  550.C3
  560 LDY#15
  570 .C4
  580LDA BLOCK,Y:STA(&70),Y:DEY:BPL C4
  590CLC:LDA&70:ADC#16:STA&70:LDA&71:ADC
#0:STA&71
  600 INX:CPX#20:BNE C3
  610 RTS
  620.IP
  630LDX#1
  640.B2
  650LDA FIRSTPL,X:STA LPL,X:STA&70
  660LDA FIRSTPH,X:STA LPH,X:STA&71
  670 LDY#15
  680 .B30
  690 LDA BODI,Y:STA(&70),Y:DEY:BPL B30
  700INX:CPX NSEG:BNE B2
  710 LDX#1
  720 .B20
  730LDA FTPL,X:STA IPL,X:STA&78
  740LDA FTPH,X:STA IPH,X:STA&79
  750LDY#15
  760.B3
  770LDA RBODI,Y:STA(&78),Y:DEY:BPL B3
  780INX:CPX#10:BNE B20
  790LDA FIRSTPL:STALPL:STA&70:LDA FIRST
PH:STA LPH:STA&71
  800 LDA FTPL:STA IPL:STA&78:LDA FTPH:S
TA IPH:STA&79
  810LDY#15
  820 .B0
  830LDA HEADL,Y:STA NAV,Y:STA(&70),Y:LD
```

```
A DAUP,Y:STA NAV1,Y:STA(&78),Y:LDA GHOST
1,Y:STA GHOST,Y:DEY:BPL B0
  840 LDX#0
  850 .Q0
  860 LDA#&90:STA GL,X:LDA#&6C:STA GH,X:
LDA#1:STA LS,X:LDA#16:STA IL,X:LDA#0:STA
IH,X
  870INX:CPX NGH:BNE Q0
  880 LDA#240:STA DL:LDA#255:STA DH:LDA#
192:STAFL:LDA#254:STA FH:LDA#10:STA PIM
  890 LDA#10:STA DELAY0:STA DELAY1:STA D
ELAY2:STA DELAY3:STA DW
  900 LDA#0:STA SHOT:STA DEAD:STA NEWSC:
STA BR:STA EAT:STA SHT0:STA SHT1:STA TMO
RT
  910RTS
  920 .DOMUS
  930 LDY#15
  940 .DM0
  950 LDA HEADUP,Y:STA&6740,Y:LDA GHOST1
,Y:STA&6C40,Y:LDA STBERRY,Y:STA&7140,Y:D
EY:BPL DM0
  960 RTS
  970 .TEST0
  980 JSR ALE:CMP#180:BCS MOVDW:CMP#120:
BCS MOVL:CMP#60:BCC MOVR
  990.MOVUP
 1000LDA#192:STA DL:LDA#254:STA DH
 1010LDY#15
 1020.B4
 1030LDA HEADUP,Y:STA NAV,Y:DEY:BPL B4
 1040 RTS
 1050.MOVDW
 1060LDA#64:STA DL:LDA#1:STA DH
 1070LDY#15
 1080.B5
 1090LDA HEADW,Y:STA NAV,Y:DEY:BPL B5
 1100 RTS
 1110.MOVR
 1120LDA#16:STA DL:LDA#0:STA DH
 1130LDY#15
 1140.B6
 1150LDA HEADR,Y:STA NAV,Y:DEY:BPL B6
 1160 RTS
 1170.MOVL
 1180LDA#240:STA DL:LDA#255:STA DH
 1190LDY#15
 1200.B7
 1210LDA HEADL,Y:STA NAV,Y:DEY:BPL B7
 1220 RTS
 1230 .AN LDA#1:STA MORT:RTS
 1240.MOV
 1250 LDA DELAY2:BEQ AM
 1260 DEC DELAY2:RTS
 1270 .AM
 1280CLC:LDA&70:ADC DL:STA&72
 1290LDA&71:ADC DH:STA&73
 1300LDY#0:LDA(&72),Y:CMP#1:BEQ AN:CMP#2
:BEQ AN:CMP#3:BEQ AN:CMP#64:BEQ A11:CMP#
119:BNE A10
 1310 JSR TEST0
 1320 JMP MOV
 1330 .A11 LDA#1:STA EAT:STA DEAD:LDA#10
:STA TRAS
 1340 .A10
 1350 LDA#5:STA DELAY2
 1360LDY#15
 1370.A0
 1380LDA#0:STA(&70),Y:DEY:BPL A0
 1390LDA &72:STA&70:STA TPL:LDA&73:STA&7
1:STA TPH
 1400LDY#15
 1410.A1
 1420LDA NAV,Y:STA(&70),Y:DEY:BPL A1
 1430LDX#1
 1440.A2
 1450LDA LPL,X:STA&72:LDA LPH,X:STA&73
 1460 LDY#0:LDA(&72),Y:BNE AB0
 1470LDY#15
 1480.A3
 1490LDA#0:STA(&72),Y:DEY:BPL A3
 1500 .AB0
 1510LDA LPL-1,X:STA TPL,X:STA&72
 1520LDA LPH-1,X:STA TPH,X:STA&73
 1530 LDY#0:LDA(&72),Y:BNE AB1
 1540LDY#15
 1550.A4
 1560LDA BODI,Y:STA(&72),Y:DEY:BPL A4
 1570. AB1
 1580INX:CPX NSEG:BNE A2
 1590LDX#0
 1600.A5
 1610LDA TPL,X:STA LPL,X:LDA TPH,X:STA L
PH,X
 1620INX:CPX NSEG:BNE A5
 1630.A6
 1640RTS
 1650.MGH
 1660 LDA DELAY1:BEQ GM
 1670 DEC DELAY1:RTS
 1680 .GM
 1690 LDA DELAY3:STA DELAY1
 1700LDX#0
 1710.G0
 1720LDA GL,X:STA&74:LDA GH,X:STA&75
 1730LDA LS,X:BEQ G6
 1740LDY#15
 1750.G1
 1760LDA#0:STA(&74),Y:DEY:BPL G1
 1770JSR TEST
 1780.G2
 1790CLC:LDA&74:ADC IL,X:STA&74
 1800LDA&75:ADC IH,X:STA&75
 1810LDY#0:LDA(&74),Y:CMP#16:BEQ G8:CMP#
32:BEQ G8:CMP#64:BEQ GN3:CMP#119:BNE G03

 1820JMP G0
 1830 .GN3
 1840  LDA#0:STA BR
 1850.G03
 1860LDY#15
 1870.G4
 1880LDA GHOST,Y:STA(&74),Y:DEY:BPL G4
 1890.G5
 1900LDA&74:STA GL,X:LDA&75:STA GH,X
 1910.G6
 1920INX:CPX NGH:BNE G0
 1930RTS
 1940 .G8
 1950 LDA GHOST:CMP#48:BEQ G9
 1960 LDA#1:STA MORT
 1970 .G9
 1980.TEST
 1990JSR ALE:CMP#30:BCC TT
 2000RTS
 2010.TT
 2020JSR ALE:CMP#180:BCS R2:CMP#120:BCS
R1:CMP#60:BCC R3
 2030LDA#192:STA IL,X
 2040LDA#254:STA IH,X
 2050RTS
 2060.R1
 2070LDA#64:STA IL,X
 2080LDA#1:STA IH,X
 2090RTS
 2100.R2
 2110LDA#16:STA IL,X
 2120LDA#0:STA IH,X
 2130RTS
 2140.R3
 2150LDA#240:STA IL,X
 2160LDA#255:STA IH,X
 2170RTS
 2180.ALE
 2190TXA:STA FINE
 2200LDY#8
 2210.BE
 2220CLC:LDA&83+3:BPL ZE
 2230LDX#2
 2240.LP
 2250LDA&83,X:EOR&80,X:STA&83,X
 2260DEX
 2270BPL LP
 2280SEC
 2290.ZE
 2300ROL&83:ROL&83+1:ROL&83+2:ROL&83+3
 2310DEY:BNE BE
 2320LDA FINE:TAX
 2330LDA&83+3
 2340RTS
 2350.TEST2
 2360JSR ALE:CMP#180:BCS VL:CMP#120:BCS
VR:CMP#60:BCS VUP
 2370.VDW
 2380LDA#64:STA FL:LDA#1:STAFH
 2390LDY#15
 2400.V0
 2410LDA DADW,Y:STA NAV1,Y:DEY:BPL V0
 2420RTS
 2430.VL
 2440LDA#240:STA FL:LDA#255:STAFH
 2450LDY#15
 2460.V1
 2470LDA DAL,Y:STA NAV1,Y:DEY:BPL V1
 2480RTS
```

BBC 32K

```
 2490.VR
 2500LDA#16:STA FL:LDA#0:STAFH
 2510LDY#15
 2520.V2
 2530LDA DAR,Y:STA NAV1,Y:DEY:BPL V2
 2540RTS
 2550.VUP
 2560LDA#192:STA FL:LDA#254:STAFH
 2570LDY#15
 2580.V3
 2590LDA DAUP,Y:STA NAV1,Y:DEY:BPL V3
 2600RTS
 2610 .MI0 LDA#1:STA MORT:RTS
 2620.MOVIT
 2630 LDA DELAY0:BEQ MJ
 2640 DEC DELAY0:RTS
 2650 .MJ
 2660CLC:LDA&78:ADC FL:STA&7A
 2670LDA&79:ADC FH:STA&7B
 2680LDY#0:LDA(&7A),Y:CMP#16:BEQ MI0:CMP
#32:BEQ MI0:CMP#64:BEQ ET1:CMP#119:BNE E
10
 2690JSR TEST2
 2700JMP MOVIT
 2710 .ET1 LDA#0:STA BR
 2720.E10
 2730 LDA#8:STA DELAY0
 2740JSR ALE:CMP#14:BCS E20
 2750JSR TEST2
 2760JMP MOVIT
 2770.E20
 2780LDY#15
 2790.M0
 2800LDA#0:STA(&7B),Y:DEY:BPL M0
 2810LDA&7A:STA&7B:STA RPL:LDA&7B:STA&79
:STA RPH
 2820LDY#15
 2830.M1
 2840LDA NAV1,Y:STA(&7B),Y:DEY:BPL M1
 2850LDX#1
 2860.M2
 2870LDA IPL,X:STA&7A:LDA IPH,X:STA&7B
 2880LDY#0:LDA(&7A),Y:BNE CB0
 2890LDY#15
 2900.M3
 2910LDA#0:STA(&7A),Y:DEY:BPL M3
 2920.CB0
 2930LDA IPL-1,X:STA RPL,X:STA&7A
 2940LDA IPH-1,X:STA RPH,X:STA&7B
 2950LDY#0:LDA(&7A),Y:BNE CB1
 2960LDY#15
 2970.M4
 2980LDA RBODI,Y:STA(&7A),Y:DEY:BPL M4
 2990.CB1
 3000INX:CPX PIM:BNE M2
 3010LDX#0
 3020.M5
 3030LDA RPL,X:STA IPL,X:LDA RPH,X:STA I
PH,X
 3040INX:CPX PIM:BNE M5
 3050RTS
 3060.FIRE
 3070LDA SHOT:BNE JK0
 3080LDA DL:STA NL:LDA DH:STA NH
 3090CLC:LDA&70:ADC NL:STA &76
 3100LDA&71:ADC NH:STA&77
 3110LDA#1:STA SHOT
 3120JMP KC
 3130.JK0 RTS
 3140.FIRE1
 3150LDA SHOT:BEQ JK0
 3160LDY#15
 3170.K0
 3180LDA#0:STA(&76),Y:DEY:BPL K0
```

SNAKE MAZE

```
3190CLC:LDA&76:ADC NL:STA&76
3200LDA&77:ADC NH:STA &77
3210.KC
3220LDY#1:LDA(&76),Y:BEQ KC0
3230JMP NOW:RTS
3240.KC0
3250LDY#15
3260.K1
3270LDA BULLET,Y:STA(&76),Y:DEY:BPL K1
3280RTS
3290 .NUM LDA#1:STA NEWSC:RTS
3300.NOW
3310LDY#1:LDA(&76),Y:CMP#16:BEQ NO10:CM
P#1:BEQ NO2:CMP#112:BEQ NO3
3320.NO1 LDA#0:STA SHOT:RTS
3330 .NO10 LDA#1:STA MORT:RTS
3340.NO2
3350LDX PIM
3360LDA IPL-1,X:CMP&76:BNE NO1
3370LDA IPH-1,X:CMP&77:BNE NO1
3380LDA#5:STA TRAS
3390LDA#1:STA DEAD:LDA#0:STA SHOT
3400LDY#15
3410.NOV
3420LDA HEXP,Y:STA TEXP,Y:DEY:BPL NOV
3430 DEC PIM:LDA PIM:CMP#1:BEQ NUM
3440RTS
3450.NO3
3460LDX#0
3470.NO4
3480LDA LS,X:BEQ NO5
3490LDA GL,X:CMP&76:BNE NO5
3500LDA GH,X:CMP&77:BNE NO5
3510LDA#0:STA LS,X:STA SHOT
3520LDA#7:STA TRAS
3530LDA#1:STA DEAD
3540LDY#15
3550.NOC
3560LDA GEXP,Y:STA TEXP,Y:DEY:BPL NOC
3570RTS
3580.NO5
3590INX:CPX NGH:BNE NO4
3600RTS
3610.DREXP
3620LDY#15
3630.NO6
3640LDA TEXP,Y:STA(&76),Y:DEY:BPL NO6
3650RTS
3660.EFAEXP
3670LDY#15
3680.NO7
3690LDA#0:STA(&76),Y:DEY:BPL NO7
3700LDA#0:STA DEAD
3710RTS
3720.BERRY
3730LDA EAT:BNE BX3
3740LDA BR:BNE R05
3750JSR ALE:CMP#1:BEQ BX0
3760RTS
3770 .BX0
3780JSR ALE:CMP#100:BCC BX1
3790RTS
3800.BX1
3810LDA#&6C:STA&73:LDA#&90:STA&72
3820 LDY#0:LDA(&72),Y:BNE R05
3830LDY#15
3840.BX2
3850LDA STBERRY,Y:STA(&72),Y:DEY:BPL BX
2
3860LDA#1:STA BR
3870.R05 RTS
3880.BX3
3890JSR ALE:CMP#2:BEQ BX4
3900RTS
3910.BX4
3920LDY#15
3930.BX5
3940LDA GHOST1,Y:STA GHOST,Y:DEY:BPL BX
5
3950LDA#0:STA BR:STA EAT
3960RTS
3970.CHANGE
3980LDY#15
3990.BX6
4000LDA GHOST2,Y:STA GHOST,Y:DEY:BPL BX
6
4010 LDA#0:STA DEAD
4020RTS
4030.ALLD
4040LDX#0
4050.AL0
4060LDA LPL,X:STA&72:LDA LPH,X:STA&73
4070LDY#15
4080.AL1
4090LDA PATO,Y:STA(&72),Y:DEY:BPL AL1
4100INX:CPX NSEG:BNE AL0
4110LDA#0:STA MORT
4120 RTS
4130.TIRO
4140 LDA DW:BEQ DW0
4150 DEC DW:RTS
4160 .DW0 LDA#1:STA DW
4170LDA SHT0:BNE TI1
4180JSR ALE:CMP#10:BCC TI0
4190RTS
4200.TI0
4210 LDA#1:STA SHT0
4220LDAFL:STA YL:LDA FH:STAYH
4230CLC:LDA&78:ADC YL:STA&8E:LDA&79:ADC
YH:STA&8F
4240JMP TI2
4250 .M23 LDA#1:STA TMORT
4260.TIV LDA#0:STA SHT0:RTS
4270.TI1
4280LDY#15
4290.H0
4300LDA#0:STA(&8E),Y:DEY:BPL H0
4310CLC:LDA&8E:ADC YL:STA&8E:LDA&8F:ADC
YH:STA&8F
4320.TI2
4330LDY#1:LDA(&8E),Y:CMP#48:BEQ TI9:CMP
#32:BEQ TI9:CMP#33:BEQ TI9:CMP#16:BEQ M2
3:CMP#0:BNE TIV
4340LDA SHT1:BNE TI3
4350LDY#15
4360.H1
4370LDA TJ,Y:STA(&8E),Y:DEY:BPL H1
4380LDA#1:STA SHT1:JMP TI5
4390.TI3
4400LDY#15
4410.H2
4420LDA TP,Y:STA(&8E),Y:DEY:BPL H2
4430LDA#0:STA SHT1
4440.TI5
4450RTS
4460.TI9
4470LDA#0:STA SHT0:LDA#1:STA MORT
4480 RTS
4490.MRSG
4500LDX NSEG
4510LDA LPL-1,X:STA&7A:LDA LPH-1,X:STA&
7B
4520LDY#15
4530.MR5
4540LDA#0:STA(&7A),Y:DEY:BPL MR5
4550DEC NSEG:LDA NSEG:CMP#1:BEQ MR6
4560 LDA#0:STA TMORT
4570RTS
4580.MR6
4590LDA#1:STA MORT
4600RTS
4610J NEXT I%
4620?&80=&53:?&81=&B5:?&82=&76:!&83=RND

4630 ENVELOPE1,1,1,1,-1,5,5,25,127,-4,0
,-2,127,60:ENVELOPE2,129,-8,0,0,15,0,0,1
27,0,0,-127,126,0
4640 ENVELOPE3,1,10,20,-30,10,5,15,127,
-2,0,-1,127,100
4650 ENVELOPE4,129,0,0,0,100,0,0,127,-2
,0,-1,126,120
4660 PRINTCHR$(132)CHR$(136)"-PROG3-"
4670 CHAIN""
4680 MODE5:S=0:FOR A=BULLET TO BULLET+6
3:?(26000+S)=?A:S=S+1:NEXT
```

Program 3

```
  10 REM ================
  20 REM = Snake Maze-3 =
  30 REM ================
  40 NGH=&491B:MORT=&491D:START=&4E20:I
P=&4E8D:BERRY=&53D3:MGH=&50B5:MOVIT=&520
C:MOVUP=&4F98:MOVDW=&4FAE:MOVL=&4FDA:MOV
R=&4FC4
  50 SHOT=&494C:FIRE=&52CC:FIRE1=&52F5:
DEAD=&494D:NEWSC=&4991:TRAS=&494E:CHANGE
=&5427:DREXP=&53B9:EFAEXP=&53C4:ALLD=&54
38:DELAY3=&49C4:DOMUS=&4F71
  60 MASE1=&4A38:FLAP=&4A38:MOV=&4FF6:M
RSG=&5505:TMORT=&49FB:TIRO=&545A
  70 DIM NI%(10),NI$(10)
  80 D%=0:HI%=0
  90 MODE5
 100 VDU23;8202;0;0;0;
 110 VDU19,2,2,0,0,0,19,3,4,0,0,0
 120 PROCBEG:CLS
 130 IF F$="Y" MODE 7:PROCINSTR:MODE5
 140  VDU23;8202;0;0;0;
 150  VDU19,2,2,0,0,0,19,3,4,0,0,0
 160 TIME=0
 170?NGH=1:PO%=0:SC%=0:LI%=5
 180 ?&49FA=7
 190 PROCSC:PROCLI:PROCHI
 200 ?&72=FLAP MOD256:?&73=FLAP DIV256:
?MORT=0
 210CALL START:CALL IP
 220 PROCWAIT
 230REPEAT
 240 CALL BERRY
 250 CALL MGH
 260 CALL MOVIT
 270IF INKEY(-66) CALL MOVUP
 280IF INKEY(-98) CALL MOVDW
 290IF INKEY(-100) CALL MOVL
 300IF INKEY(-101) CALL MOVR
 310 CALL MOV
 320 IF INKEY(-99) AND ?SHOT=0 SOUND&00
11,2,150,1:CALL FIRE
 330 CALL FIRE1
 340 CALL TIRO
```

```
  350 IF ?TMORT=1 PROCTMORT
  360 IF ?DEAD=1 PROCDEAD
  370UNTIL ?MORT=1 OR ?NEWSC=1
  380 IF ?NEWSC=1 PROCNEWSC:CLS:GOTO 190
  390 PROCMORT
  400 IF LI%<>0 PROCPAUSE(1000):CLS:GOTO
 180
  410*FX15,1
  420 MODE7:PROCGOVER
  430 PROCHIT:PROCHITABLE:HI%=NI%(1)
  440 IF S$="Y"GOTO 90 ELSE END
  450DEFPROCDEAD
  460 IF ?TRAS=10 SOUND3,3,7,2:CALL CHAN
GE:GOTO 520
  470 IF ?TRAS=7 B%=500 ELSE B%=240
  480CALL DREXP
  490 SOUND 1,1,78,1
  500FOR S%=0 TO B%:NEXT
  510CALL EFAEXP
  520 SC%=SC%+10*?TRAS:PROCSC
  530ENDPROC
  540DEFPROCNEWSC
  550 IF PO%=1 PROCTB:ENDPROC
  560 FLAP=FLAP+140
  570 IF FLAP=&4C68 PO%=1
  580 ?NGH=?NGH+1
  590 IF ?NGH>=5 ?NGH=5
  600 ENDPROC
  610DEFPROCMORT
  620CALL ALLD
  630SOUND&0010,4;6,20
  640 FOR R%=1 TO 1000:NEXT
  650LI%=LI%-1
  660ENDPROC
  670DEFPROCSC
  680COLOUR 1
  690PRINTTAB(1,1);LEFT$("00000",5-LEN(S
TR$SC%));SC%
  700ENDPROC
  710DEFPROCLI
  720COLOUR2
  730PRINTTAB(9,1);LEFT$("00",2-LEN(STR$
LI%));LI%
  740ENDPROC
  750DEFPROCHI
  760COLOUR1
  770PRINTTAB(14,1);LEFT$("00000",5-LEN(
STR$HI%));HI%
  780ENDPROC
  790DEFPROCTB
  800 T%=INT(TIME/6000):IF T%>=10 R%=1:G
OTO 820
  810 R%=10-T%
  820 FOR W%=1 TO 10
  830 SC%=SC%+10*R%:PROCSC
  840 SOUND1,1,100+W%*10,1
  850 FOR E=1 TO 200:NEXT
  860 NEXT
  870?DELAY3=?DELAY3-1
  880IF ?DELAY3<6 ?DELAY3=6
  890FLAP=&4A38:?NGH=1
  900PO%=0
  910 TIME=0
  920ENDPROC
  930DEFPROCNGAME
  940PRINT''"ANOTHER GAME ?"
  950REPEAT A$=GET$:UNTIL A$="Y" OR A$="
N"
  960ENDPROC
  970DEFPROCBEG
  980 COLOUR1
  990FOR C%=12 TO 20
 1000PRINTTAB(6,C%);"!"
 1010NEXT
 1020PRINTTAB(7,12);"ESMIFRASOFT"
 1030 COLOUR 3
 1040PRINTTAB(7,14);"presents"
 1050COLOUR2:PRINTTAB(7,16);"SNAKE MAZE"
 1060 COLOUR 1
 1070PRINTTAB(7,18);"by"
 1080COLOUR3:PRINTTAB(7,20);"C.RONDAO"
 1090CALL DOMUS
 1100 COLOUR 1:PRINTTAB(4,24);"Instructi
ons ?"
 1110 REPEAT F$=GET$:UNTIL F$="Y" OR F$=
"N"
 1120ENDPROC
 1130DEFPROCGOVER
 1140 FLAP=&4A38
 1150IF D%=1 ENDPROC
 1160A%=10000
 1170FOR I%=1 TO 10
 1180A%=A%-200
 1190READ B$:NI$(I%)=B$:NI%(I%)=A%
 1200NEXT
 1210D%=1
 1220DATA Carlos Rondao,Ana Otero,Paula
 Rondao,ASP.Rondao,Sub/Ten Jordao,Pauluch
a a trapeuta,Anucha terrivel,Moi le prem
ier,NRP 'Pereira da Silva',Rantanplan
 1230ENDPROC
 1240DEFPROCHITABLE
 1250FOR A=0 TO 2 STEP 2:PRINTTAB(4,A);C
HR$(129);"-----------":NEXT
 1260PRINTTAB(4,1);CHR$(130);"Best Score
s"
 1270I%=0
 1280FOR A=3 TO 21 STEP 2
 1290I%=I%+1
 1300PRINTTAB(3,A);CHR$(131);I%;".";TAB(
6,A);CHR$(130);LEFT$("00000",5-LEN(STR$N
I%(I%)))NI%(I%);
 1310PRINTTAB(0,A+1);CHR$(129);NI$(I%)
 1320NEXT
 1330PRINTTAB(4,23);CHR$(130);"Another G
ame ?"
 1340REPEAT:S$=GET$:UNTIL S$="Y" OR S$="
N"
 1350ENDPROC
 1360DEFPROCHIT
 1370I%=0
 1380REPEAT
 1390I%=I%+1
 1400UNTIL NI%(I%)<SC% OR I%=10
 1410IF NI%(I%)<SC% P=10:REPEAT:NI%(P)=N
I%(P-1):NI$(P)=NI$(P-1):P=P-1:UNTIL P=I%
-1 ELSE GOTO 1460
 1420NI%(I%)=SC%
 1430INPUTTAB(1,18)"Your Name",NI$(I%)
 1440IF LEN(NI$(I%))>22 CLS:GOTO 1430
 1450 HI%=NI%(1)
 1460 CLS
 1470 ENDPROC
 1480DEFPROCPAUSE(T%)
 1490FOR Q=1 TO T%
 1500NEXT
 1510ENDPROC
 1520DEFPROCINSTR
 1530 PRINTTAB(12,1);CHR$(141);CHR$(133)
;"INSTRUCTIONS"
 1540 PRINTTAB(12,2);CHR$(141);CHR$(133)
;"INSTRUCTIONS"
 1550 PRINT'CHR$(134)"In this game you c
ontrol a green snake"
 1560 PRINTCHR$(134)"in a mase.You must
avoid the red ghost"
 1570 PRINTCHR$(134)"and the red snake h
ead."
 1580PRINTCHR$(134)"Your  objective  is
 to kill the other"
 1590PRINTCHR$(134)"snake shotting her b
ehind."
 1600PRINTCHR$(134)"Each dead snake take
s you to a new maze"
 1610PRINTCHR$(134)"If you  eat the stra
wberry  the ghosts"
 1620PRINTCHR$(134)"turn to green for a
while and then you"
 1630PRINTCHR$(134)"can shot them gettin
g extra points."
 1640PRINTCHR$(134)"Be careful not to sh
ot your self..."
 1650 PRINT'CHR$(133)"          'A'--up
'Z'--down"
 1660PRINT'CHR$(133)"          'V'--left
'B'--right"
 1670PRINT'CHR$(133)"              'SPACE
'-fire"
 1680PRINT'CHR$(134)CHR$(136)"
'any key'to play'"
 1690 G$=GET$
 1700ENDPROC
 1710DEFPROCTMORT
 1720CALL MRSG
 1730 SOUND&0010,4,RND(3)+3,4
 1740ENDPROC
 1750DEFPROCWAIT
 1760COLOUR 1
 1770PRINTTAB(6,3)"READY ?"
 1780PROCPAUSE(3000)
 1790COLOUR0
 1800PRINTTAB(6,3)"READY ?"
 1810ENDPROC
```

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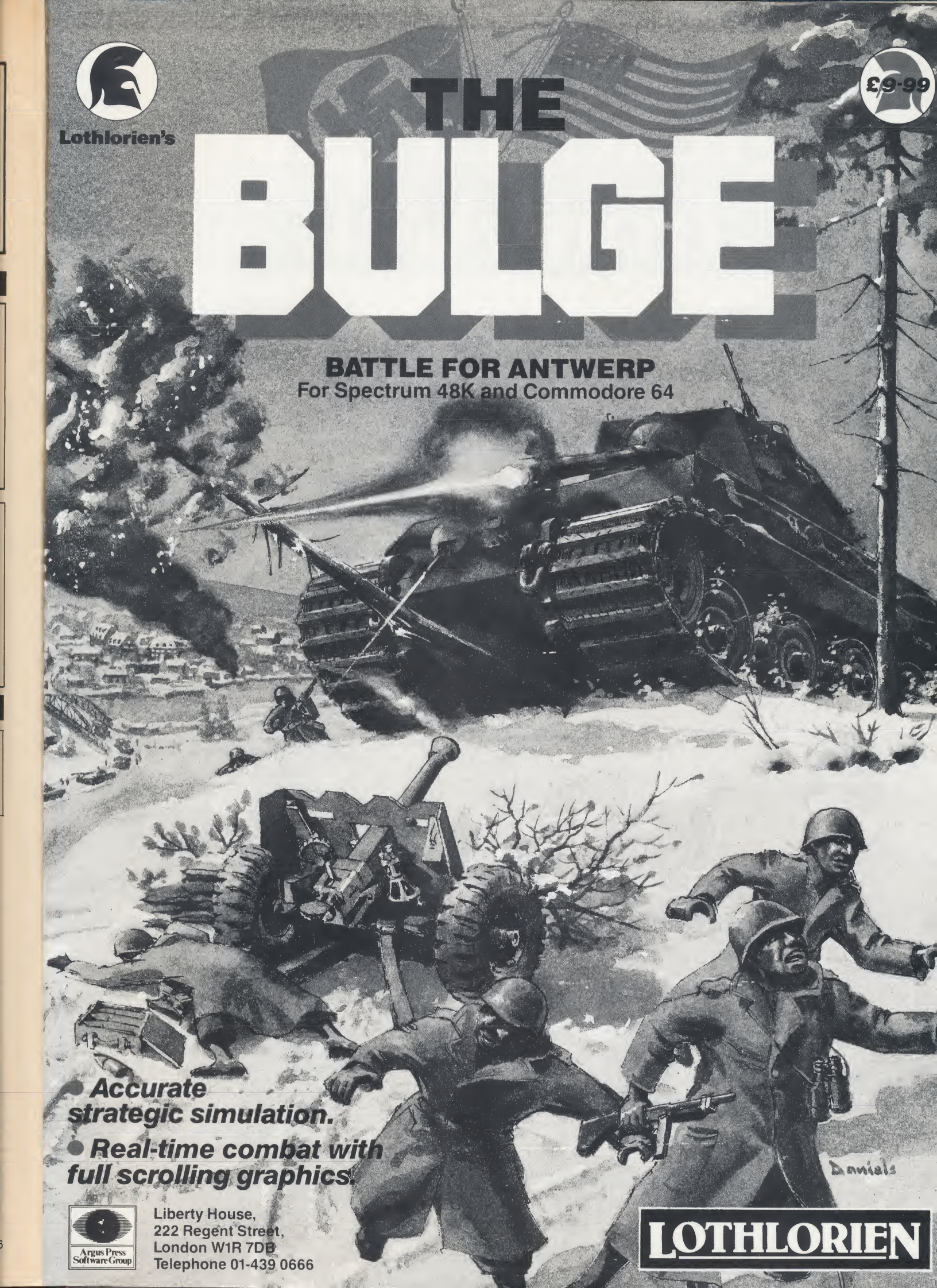

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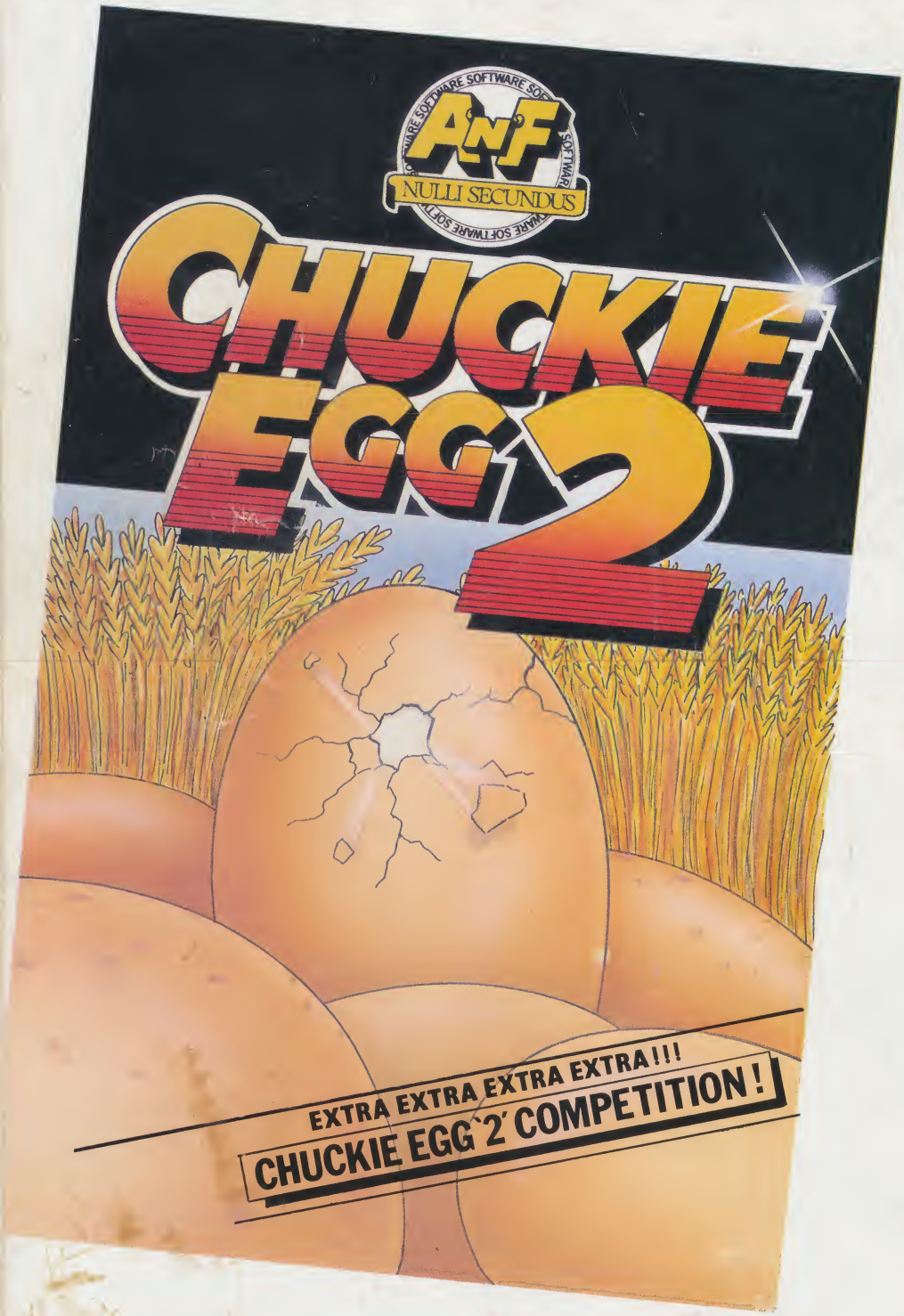

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